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ABSTRACT

This notebook for teachers is the result of (1) a workshop held to discuss ways of working with children who do not respond in traditional ways to learning, despite their high IQ's and apparent abilities, and (2) a questionnaire which was sent to various schools inside and outside the United States designed to elicit specific information on what and how schools provide for children who have learning problems. The guide discusses solutions to various problems which might arise from the creation of a diagnostic program for these children in the school. The notebook also includes brief descriptions of several tests and evaluations which teachers may use with these children. The notebook then presents diagnostic reports written about four children who represent composite pictures of certain characteristics. The procedures followed for each child are the same and include referral by a teacher conference with the classroom teacher, diagnostic teacher, and administrator; and a conference with parents to let them know what has been done and what procedure has been suggested. The notebook presents various classroom techniques to be used by the teacher in order to sharpen children's receptive and expressive processes. It also contains a discussion of how children with learning problems differ from slow learners, and how to make this distinction by observation of their overt behavior. The notebook also includes guides for parents which contain activities and exercises for children to practice during the summer. The last section discusses methods of helping children follow directions. (BD)

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A TEACHER'S NOTEBOOK: ALTERNATIVES FOR CHILDREN WITH LEARNING PROBLEMS

Cynthia A. Clarke
Jeanne F. Cullander
Sherry R. Migdail

The Beauvoir School
Washington, D.C.

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Foreword

This notebook for teachers developed in a series of stages. In March 1973, at a workshop for teachers at the Beauvoir School, in Washington, D.C., a group of us from the school and other outside staff members held an all-day workshop on our work with children who do not respond in traditional ways to learning, despite their high IQ's and apparent abilities.

The "cookbook" we distributed to participants--a method of record-keeping and of providing information to teachers and parents--remains as our framework here.

In July 1974, Wellington Grimes, of NAIS, suggested that a teacher's notebook based on these materials would be a useful guide for the new teacher and would perhaps serve as a "recipe guide" for the more experienced. I invited Jeanne Cullander, a second-grade teacher at Beauvoir, and Cynthia Clarke, a diagnostic teacher at Beauvoir, to work with me in preparing this notebook. It has been an interesting and productive task, for, as with all records and reports, the greater the discussion about the "why" and "how" of children's learning, the more one sees and explores.

There is no way to see all the fascinating, perplexing, bewildering, and wonderful ways that children adapt for learning. We have gathered some of the alternatives here, which we hope you will find useful.

We dedicate our work to the children and teachers of Beauvoir, without whom this book would not have been possible.

Sherry Migdail
Assistant Principal
Beauvoir School
Washington, D.C.

Questionnaire on Learning Problems

In August 1974, to lay the groundwork for this notebook, the National Association of Independent Schools sent a questionnaire to member schools having grades PS-8. The questionnaire was designed to elicit specific information on what and how schools provide for children who have learning problems.

We received responses from 176 schools in 35 states and 11 schools outside the United States. We tabulated the results by hand and organized the data in the form reported here.

Question 1

"Does your school have the services of a staff member, university clinic, school psychologist, or any other resource outside the school available for consultation to the school and parent for a child having learning problems?"

Yes	169
No	18

Question 2

"If you find that a child is having problems, what steps do you take to help him and his parents meet the issues involved?" Asked to list four steps, the schools reported the following:

refer the child for testing

observe the child

confer with parents

confer with teachers

confer with parents and teachers together

refer to guidance personnel (psychological)

make recommendations to parents and teachers

refer to an outside source (clinic/tutorial)

indicated methodologies

look at the child's past history

The four-item responses fell into three general patterns, listed here in order of preference:

A

refer the child for testing
confer with parents and teachers together
make recommendations to parents and teachers
indicated methodologies

B

confer with parents
confer with teachers
refer the child for testing
refer to an outside source

C

confer with parents and teachers together
make recommendations to parents and teachers
refer the child for testing
indicated methodologies

Few patterns took a child's past history into account. Many schools referred to outside sources for psychological help. "Indicated methodologies" often included reading methods (phonic vs. sight, etc.). Few schools spoke of observational techniques.

Question 3

"What do you feel is the greatest limitation in helping children with learning difficulties?" Figures in parentheses indicate numbers of responses to items listed on the questionnaire.

lack of trained personnel (89)

inability to link problem with classroom practice (84)

lack of knowledge about testing and diagnosing (51)

"other" (49)

The responses to "other" included the following:

time
funds
explanation to be given to parents; parental help
parent reluctance to accept fact that child had a problem
inability of classroom teacher to recognize that problem existed or to accept it
staff cooperation/ability to work as a unit on the staff; global approach missing
space
child's self-image
cooperation from child apparently lacking
lack of understanding by both teachers and parents
inability to individualize instruction
lack of materials and remedial ideas for older children
inability to communicate with outside professionals
generalized communication problems
inability to deal with parents in evaluative process

Question 4

"If you could set up a diagnostic/prescriptive classroom, what information would you like to have?" Responses included the following:

procedures described in very general, vague categories (54)
diagnostic tests and procedures (48)
remediation practices (46)
available materials (41)
what to recommend to classroom teacher (17)
teacher training (15)
what others are doing (11)
characteristics of children (11)
not interested in such a classroom (11)
"everything" (6)
specifics about costs (3)
no information needed (2)
miscellaneous
- how to inform parents
- how to get parents to agree
- information about workshops
- information about testing (group/individual)
- techniques for re-evaluation
- bibliographic information
- how to keep up with current research
- how to find community resources

miscellaneous (cont'd.)
how to organize one's time
how to share or pool information

Question 5

"Can you establish the following categories of difficulty in rank order as you appear to have them in your school?"

inability to read smoothly and easily

inability to understand what is being read

inability to understand presented directions

inability to organize information

inability to react expressively to an activity

inability to follow directions

inability to concentrate on written work

lack of interest in reading and related tasks

The respondents generally ranked their answers in two patterns:

A

inability to organize information
inability to follow directions
inability to understand presented directions
inability to understand what is being read
inability to read smoothly and easily
inability to react expressively to an activity

B

inability to understand what is being read
inability to understand presented directions
inability to organize information
inability to concentrate on written work
inability to react expressively to an activity
inability to read smoothly and easily
lack of interest in reading and related tasks

Question 6

"Please describe briefly your own primary concerns in dealing with children who have difficulties in school. Remember we are talking about children with average or above average abilities who are not functioning in

classrooms as their teachers feel they could." Following are 12 of the primary concerns listed by respondents:

child's self-image and confidence
diagnosis
early recognition of a problem
teacher training and competence
parent/teacher understanding and cooperation
time
supporting attitudes of parents and others
motivation
sufficient facilities
proper setting
how and where to find appropriate help
how to help classroom teacher

I. IT TAKES ALL OF US . . .

It is vital to the health of a school that it define its capacities and limits. To be overly optimistic about and generous with one's energies and hopes may prove a disastrous course for students, parents, teachers, and the school. One therefore has to be realistic and decide if an emotionally disabled child with learning problems might be better served in another school setting. Despite intensive evaluation of children at three and four years of age, one cannot always foresee developmental learning problems that may surface by age six or seven. The school's administrators must not adopt a defensive stance by "blaming" the teacher or the parent or even the child for the child's inability to keep up with the instructional content or pace of the school.

Teachers, for their part, must keep administrators closely informed. Anecdotal records, collected written papers, and behavior problems must be brought to the active attention of and discussed with administrators so that they may become intelligently and intellectually involved by sharpening their powers of observation and thinking. Administrators should also frequently join classroom and diagnostic teachers in a teaching situation.

A child with above-average intelligence who is having difficulty learning in the classroom can be helped in a diagnostic/prescriptive center. Any reasonable test will pinpoint specific areas needeeding attention, and any interested, knowledgeable diagnostic teacher can interpret test results adequately.

But the best clues come from the classroom teacher. It is therefore wise to abide by the rule "All children must be referred by the classroom

teacher." His or her observations, specific examples, and "I-get-the-feeling" impressions provide valuable information about a child. The mutual concern of classroom and diagnostic teachers motivates both to probe for better understanding of how a child learns.

Although problems will and do arise, under the best of circumstances, solutions can be found.

1. Children have to leave the classroom for 45-minute sessions in the diagnostic room. Possible solution: try to arrange for all of them to leave at the same time, not at scattered times during the day

2. Feelings of missing out, which may also foster feelings of isolation from classmates. Possible solutions: (a) avoid introducing new material while the children are gone; (b) encourage children to take classroom work to the diagnostic room for special help.

3. Diagnostic teacher is becoming so involved in isolated remedial activities designed for specific learning needs that remediation is not related to the child's needs in the classroom. Possible solutions: (a) arrange it so that the diagnostic teacher can participate in the classroom sometime every week; (b) have classroom teacher share information on specific plans in all academic areas with the diagnostic teacher.

4. Children who need additional help in the diagnostic room are classed as "dummies" and the diagnostic teacher is a "suspicious" character. Possible solution: a good working relationship in the classroom helping "bright" children gives all the children better perspective.

5. A conflict can develop between the diagnostic teacher and the classroom teacher. A loss of perspective by both parties: the diagnostic teacher measures progress in small steps and fails to evaluate the child's progress in relation to that of his classmates; the classroom teacher measures

progress based on the child's performance compared with that of the other children. Possible solutions: (a) continued awareness by both parties that they are both teaching the child, but in different ways; (b) mutual discussion and understanding of the different roles each teacher plays; (c) perhaps none, when there are personality problems; better handled by the administration.

6. Dependency: (a) child depends on constant special help; (b) parent dependency--"The only way the child can succeed is with special help"; (c) diagnostic teacher's "savior" complex--"I am the only one who can teach this child to read"; (d) classroom teacher depends on diagnostic teacher to remove the "unsuccessful" child from her responsibility. Possible solutions: (a) peg the work level so that the child can be independently successful; (b) hard problem--constant help extended to parents; (c/d) there can be no "I am the only . . ." attitude; it has to be "we." If the "I" attitude exists, the child whom both people are trying to help gets caught in the middle.

7. How to eliminate, or at least mitigate, the stigma often associated with going to the diagnostic room. Possible solutions: (a) help the entire group to realize that learning problems are not abnormal; (b) work in small groups and across room and grade barriers when possible; (c) invite all children to visit and use materials in the diagnostic room; (d) have the diagnostic teacher participate in all school activities involving all children; (e) have children return to the classroom with some evidence of success--something they might teach the class.

One thing we have not solved is an appropriate title for the "diagnostic room." It was called "Mrs. Migdail's group" when it first began; the next year an acronym was used--"The ROCK Room"--combining the names of the two diag-

nostic teachers, who are no longer with us. Now it is the "diagnostic room." What we find with this title is that parents and other adults find its meaning less than complimentary, and some children feel that it implies some stigma or, at best, a sense of inadequacy.

So we think we will simply go back to calling it "Mrs. _____'s room."

II. TESTS AND EVALUATIONS

Some commercially prepared tests provide normative data and excellent manuals that may be used easily by classroom teachers. Other instruments require some degree of training and are best left to the discretion of a diagnostic teacher for their use with children.

All written work as well as the many ways a teacher has for discerning the needs and abilities of children can be excellent diagnostic "tools."

A spelling paper, for instance, will give clues to reversals, inversions, spatial problems, and auditory-discrimination problems. The child who spells in an intelligent but phonetic way may need some help in word recognition, a word bank of "function" words, or interesting drill in visual recall. The child may also need some help in understanding that spelling is one area of the curriculum where creativity is not encouraged, since only one arrangement of letters is accepted as correct. Some patterns are, of course, predictable, and generalizations can be made by children as they learn to use written language. Learner (1971) discusses spelling in a very reasonable way, offering good teaching strategies and an excellent bibliography.

We include here brief descriptions of several tests and evaluations so that the teacher may judge the utility of each for his or her particular child. A school should have access to these tests and to an individual who is trained to use them, diagnose from the information obtained, and interpret their results.

In the case studies in Section III, we mention other tests, used less frequently, which are still available and still good. We do not describe those tests in detail.

Slingerland Screening Tests for Identifying Children with Specific Language Disability
Pre-Reading Test, grades 1-2
Form C (revised edition), grades 3-4
Specific Language Disabilities Test, grades 6-8

Beth H. Slingerland
Educators Publishing Service
75 Moulton St., Cambridge, Mass. 02138

Slingerland materials are popular in many schools. We confine testing to groups of six to eight children so that we can be effective observers of their behavior. We have found the visual-association pictures and word lists useful remedial materials for specific conditions:

1. Pictures
   a. Vocabulary
   b. Matching pix
   c. Domestic Animals
   d. Things to ride on or in
   e. Workers
   f. Contrast and resemblance
   g. Prepositional phrases
   h. Adjectives
   i. Singular and plural

2. Phonetic word tests for children's use

3. Teacher's word lists for reference

The test is not normed and it remains a diagnostic instrument. It provides a means whereby we can look for patterns of behavior, such as reversals and inversions. The visual portions have been more useful to us than the auditory ones.

Pre-Reading Screening has provided us with some significant validity for younger (kindergarten) children.

The teacher's manual for the Specific Language Disabilities Test, grades 6-8, by Neva Malcomesius, has very useful parent information in its appendix. The test protocol has proved to be an instrument that parents can read with a teacher in a conference situation. Typical questions are given to help

classroom teachers trace, with a parent, language problems the child has had through his years of early development:

> "Was your child's speech still 'immature' at age four or five? Did he say 'I fink dat' for 'I think that'?"
>
> "Can your child easily remember a short message word for word? Can he learn phone numbers? Does he know his number?"

This line of questioning helps a parent to be specific about his or her child and makes diagnosis and prescription for home and school more nearly accurate.

Following is an itemized analysis of skills required for each subtest:

Visual tests

1. Far-point copying
2. Near-point copying
3. Visual perception, memory, discrimination (Use marker to eliminate figure-ground.)
4. Visual perception, retention, discrimination, and figure-ground (Check against Frostig figure-ground test.)
5. Visual perception, visual memory (long-term kinesthetic memory [letter formation] and motor control)

Auditory tests

6. Auditory discrimination, short-term memory, long-term kinesthetic memory (letter formation), and motor control
7. Auditory discrimination, short-term memory (auditory sequencing), long-term kinesthetic memory for letter, number, and geometric forms, and motor control
8. Auditory discrimination (visual discrimination) (Eliminate recall factor.)

Wechsler Intelligence Scale for Children (WISC)

David Wechsler
Psychological Corporation
304 E. 45th St., New York, N.Y. 10017

Classification of IQ's and Scaled Scores

IQ	Scaled Score Range	Classification	Percentage of population
130-156	15 - 19	Very Superior	2.2
120-129	13(P)* - 14	Superior	6.7
110-119	12 - 13(V)*	Bright Normal	16.1
90-109	9 - 11	Average	50.0
80- 89	7(V)** - 8	Dull Normal	16.1
70- 79	6 - 7(P)**	Borderline	6.7
44- 69	2 - 5	Mental Defective	2.2

*A scaled score of 13 on a performance scale is in the superior range; 13 on a verbal subtest is in the bright-normal range.

**A scaled score of 7 on a verbal subtest is in the dull-normal range; 7 on a performance-scale subtest is in the borderline range.

From our experience, we find that information gained from the WISC can be of great value to the diagnostic teacher in understanding a child. The classroom teacher often reviews WISC findings before holding a parent conference. The test, revised in 1973, now provides far better normative data than it used to, for the standardization sample reflects a wider cultural and racial range of the total population of the United States.

Verbal Subtest Breakdowns: Their Assumptions and Measures

Information — Reflects memory development and functioning; educational and cultural background; information from surrounding environment

1. Questions included cover a broad range of materials allowing an adequate sampling of information.

2. Such information may be acquired by individuals who experience the "usual" opportunities in our society.

3. The range of information of any individual is one indication of intelligence.

4. More intelligent children have greater range of information and seek more mental stimulation.

Comprehension — Practical understanding of everyday social situations, acceptance of "conventional" standards of behavior

1. Social behaviors are acquired and used by children through both everyday living experiences and formal education (school).

2. Children with greater ability, broader interests, and more curiosity will have more to draw from in solving practical social problems.

3. Comprehension assumes a synthesis of the knowledge received in order to cope with and solve problems of social behavior.

Arithmetic — Arithmetic reasoning, attention, and concentration

1. Ability to manipulate number concepts is one criterion of intelligence.

2. One facet of this manipulation is attention and concentration.

3. Concentration and attention are in essence noncognitive; abstract concepts of numbers and manipulation of processes are cognitive functions. The test demonstrates how the child relates cognitive and noncognitive factors in terms of thinking and performance.

Similarities — Ability to handle abstract ideas, form concepts and generalize; capacity for associative thinking

1. The range of an individual's ability to discriminate likenesses is thought to correlate with general intelligence.

2. Relationships among classifications develop in the child through exposure to materials and information both at home and at school.

Vocabulary — Vocabulary as measured by auditory comprehension of words

1. Definition of words implies reorganization of ideas--as such, a criterion of intelligence.

2. Vocabulary is assumed to be a measure of learning ability and of verbal information. (There is an obvious difference between the child who defines a donkey as an "animal" and the one who defines it as "a beast of burden, four-legged, classified with the mammals.")

Digit span

Immediate auditory recall, attention, and concentration during a learning situation

1. A good measure at lower age levels; any child who cannot remember four forward and two backwards by age seven and a half probably has some degree of mental deficiency.

2. Rote memory is one of those abilities that enter into that certain absolute minimum for all levels of intellectual functioning.

3. Measures intellectual functioning at lowar ability levels.

4. Repetitions of digits forward and backwards may be of diagnostic significance.

Performance Subtests: Their Assumptions and Measures

Picture completion

Visual perception of detail and discrimination of essential detail; alertness to environment

1. Ability to comprehend familiar objects visually and to determine the absence of essential rather than nonessential or irrelevant details is a valid measure of intelligence.

2. This test is helpful in evaluating a child whose perception is adequate.

Picture arrangement

Ability to see cause-and-effect relationships in social situations, figure out chronological sequence, and note significant detail

1. Ability to evaluate what is happening in one picture, sequence logically, and then tell the story is indicative of intelligence.

2. Results of this test can be checked against picture completion and block design to differentiate between purely perceptual deficits and difficulties with organizing stimuli in sequential progression.

Block design — Visual perceptual ability to analyze, synthesize, and copy abstract designs

1. Nonverbal concept formation is needed--plus a measure of visual-motor coordination.
2. The test measures the organization of visually perceived materials in the context of time limitations.
3. The test is suggested as an excellent nonverbal measure of intelligence.
4. This test is culturally the most fair of the tests.

Object assembly — Ability to see relationships of whole to part of whole when dealing with concrete, relatively familiar materials

1. Success requires visual anticipation of part-whole relationships and flexibility in working toward a goal which at first may be unknown.
2. The test requires visual perceptual skills, spatial relationships, with no clues other than titles: "Boy," "Face," etc.

Coding — A visual-motor speed test involving associating meaning with symbol, "learning" when stimuli are visual and when they are kinesthetic

1. Ability to absorb material presented in an associative context is also called for.
2. Success is determined by speed as well as accuracy.

Mazes — Ability to plan ahead

1. Tests attention to instructions, pencil control, and visual-motor coordination.

Special Significance of WISC

1. A discrepancy of 15 points between the performance and verbal aspects is significant. Such a discrepancy should be evaluated in terms of the subtest scatter. School performance may be related in some areas (perceptual organization, spatial organization in low performance may be affected).

2. The WISC may best be employed by the teacher in discussing the child's test behavior with the psychologist or tester: the child may have been anxious

in some areas and less anxious in others, or speed may have been a deterrent to scoring high. The how of the test can be more significant to the teacher than many of the results.

3. The discrepancy pattern appears frequently in children with learning disabilities. The three subtests on which gifted children score highest are similarities, comprehension, and information; the three on which they score lowest are picture arrangement, picture completion, and digit span.

4. The WISC is useful for children of normal intelligence from ages five to fifteen. It is not useful for the lowest end of the intelligence scale.

Illinois Test of Psycholinguistic Abilities (ITPA)
Revised edition

Samuel A. Kirk, James J. McCarthy, and Winifred D. Kirk
University of Illinois Press
Urbana, Ill. 61801

The Illinois Test of Psycholinguistic Abilities attempts to group learning problems in children under three rubrics: academic problems (most commonly reading, writing, and arithmetic); nonsymbolic problems (perceptual problems: an inability to perceive, discriminate, or recognize efficiently in one or more sense modalities); and linguistic or symbolic problems (an inability to attach meaning to what is heard or what is seen). These three headings are classified into three processes and two levels of organization.

Psycholinguistic processes

1. Receptive process: recognizing and/or understanding what is seen and heard
2. Organizing process: learning relationships from what is seen or heard
3. Expressive process: using those skills necessary to express ideas verbally or by movement

Levels of organization

1. Representational level: behavior that requires some symbols that carry meaning

2. Automatic level: less voluntary but highly organized patterns--closure, speed of perception, reproduction of visual and auditory sequence, rote learning, etc.

Subtests

Test	Definition	Process	Level
1. Auditory reception	Ability to know what is heard	Receptive	Representational
2. Visual reception	Ability to gain meaning from what is seen	Receptive	Representational
3. Auditory association	Ability to relate concepts presented orally	Organization	Representational
4. Visual association	Ability to relate concepts presented visually	Organization	Representational
5. Verbal expression	Ability to express concepts verbally	Expressive	Representational
6. Manual expression	Ability to express ideas manually	Expressive	Representational
7. Grammatical closure	Ability to make use of the redundancies of oral language to acquire automatic syntactical and grammatical inflections	Organization	Automatic
8. Visual	Ability to identify a common object from an incomplete visual presentation	Organization	Automatic
9. Auditory sequential memory	Ability to reproduce memory sequences of varying length	Organization	Automatic

Test		Definition	Process	Level
10.	Visual sequential memory	Ability to reproduce sequences of nonmeaningful figures from memory	Organization	Automatic

Supplementary Tests

1.	Auditory closure	Ability to grasp a word when only part of it is given
2.	Sound blending	Ability to synthesize and integrate isolated sounds into a whole word

These supplementary tests attack the phenomenon of closure and should be given to most children who appear to be learning to read slowly or not at all.

Developmental Test of Visual-Motor Integration

Keith E. Beery
Follett Educational Corporation
1000 W. Washington Blvd., Chicago, Ill. 60607

This test was devised as a measure of the degree to which visual perception and motor behavior are integrated in the young child. The test consists of 24 geometric forms to be copied, using pencil and paper. The age norms for the form range from one year, nine months, for the easiest to thirteen years, eight months, for the most difficult. It can be administered by teachers, diagnosticians, or trained testers and should be regarded as an additional instrument for educational assessment.

The rationale for the test suggests that the development of visual, auditory, tactual, kinesthetic, vocal, and motor functions in the young child should be taken as a whole, since almost all school tasks require that these functions work together, not separately. Most of the difficulties children

are of an integrative nature, many commonly involving coordination of visual and motor functions.

The test may be given to children individually or in groups. As with most assessments, giving it to one child at a time yields far more significant information about a child's behavior and is of greater value.

The administration and scoring manual contains a wealth of developmental comments, including age norms from a variety of sources. The final pages are devoted to assessment and remediation of visual-motor difficulties, which should be regarded as suggestions to help a teacher develop some programming.

Woodcock Reading Mastery Tests

Richard W. Woodcock
American Guidance Service, Inc.
Publishers Building
Circle Pines, Minn. 55014

This test is well presented in a very readable, agreeable easel-kit arrangement. It has two forms, A and B, which may be used interchangeably at any level. There are five subtests: (1) letter identification, (2) word identification, (3) word attack, (4) word comprehension, and (5) passage comprehension. The last uses a modified "cloze" procedure, in which the child silently reads a passage that has a word missing and tells the examiner what word should go in the blank space. The cloze technique was developed to test reading ability. It does not extend to comprehension tests.

The composite index is readily computed, and individual scores are grade-equivalent at each reading, grade-reading, and failure-reading level. The information from the test can readily be adapted to a remedial program in reading and/or in other, more discrete functions, such as visual perception.

This test can be administered by a teacher, but it requires a considerable amount of time and is best left to a trained tester.

Children's Embedded Figures Test (CEFT)

Witkin, Otzman, Raskin, and Karp
Consulting Psychologists Press, Inc.
577 College Ave., Palo Alto, Calif. 94306

The Children's Embedded Figures Test is designed to be administered individually to children in the five- to ten-year range. There is also a CEFT group-administered test that covers a wider age span.

The CEFT is a perceptual test. The task on each of the trials is to locate a previously seen simple figure within a larger complex figure that is so drawn as to contain both the looked-for original and simple figure. The rationale is based on the theory that the ability to break up an organized visual field in order to keep a part of it separate from that field relates in like form in areas of cognitive functioning. Research for the test indicates that competence in disembedding in perceptual tests is strongly associated with competence in nonperceptual problem-solving tasks. The test looks for an individual's "perceptual style" to relate it to his "cognitive style."

The test is useful when there is a question about the child's ability to solve problems when the solution is not readily apparent and/or when the solution requires some divergent thinking--use of a critical element in a different context from the one in which it has been presented.

Peabody Picture Vocabulary Test

Lloyd M. Dunn
American Guidance Service, Inc.
Publishers Building
Circle Pines, Minn. 55014

The Peabody Picture Vocabulary Test tests a child's ability to understand words he hears. A plate of four pictures is presented, and the child is asked to identify a spoken word by pointing to the picture that describes the word. Administration of this test requires no special preparation other than complete familiarity with the materials. It takes 10 to 15 minutes to give this untimed test. The age range is from two years, three months, to eighteen years, five months. Intelligence quotients are available from raw scores, and the test is designed to provide an estimate of the subject's verbal intelligence through measuring his hearing vocabulary.

This test may be given to all subjects who can hear words, see drawings, and indicate their choices in a manner that communicates. Alternate forms are provided for retesting purposes.

It is important to recognize the distinction between hearing a word and identifying it in a picture and defining a word. The latter is concerned more with expressive vocabulary than with recognition.

Auditory Discrimination Test

Joseph M. Wepman
Language Research Association, Inc.
175 E. Delaware Pl., Chicago, Ill. 60611

This test is an easily administered way to determine the child's ability to recognize differences among phoneme sounds in English speech. The child is asked to listen to pairs of words, while faced away from the examiner, and

to indicate whether the words read aloud are alike or different. Each of the 40 pairs of words given is equal in length, so that attending and listening span are equal throughout.

The test is useful as a check of children in early elementary years who have not developed discrimination skills. What it tests is related to the development of speech accuracy and to some extent to reading ability.

Diagnostic Reading Scales
Revised edition

George D. Spache
CTB/McGraw-Hill Division
Del Monte Research Park
Monterey, Calif. 93940

This test is easy to administer and can be used as a periodic assessment of a child's reading progress. It is divided into three major sections:

1. Word recognition -- reading words in isolation. Three word lists are provided, with each getting progressively more difficult. A grade level may be computed.

2. Paragraph reading and comprehension

   a. Instructional reading level -- The child reads the paragraphs orally and answers comprehension questions (which are provided).

   b. Independent reading level -- The child reads the paragraphs silently and answers comprehension questions.

   c. Potential level -- The examiner reads the paragraph to the child and then asks comprehension questions. This is a good measure of a child's listening comprehension.

3. Phonics test

   a. Consonant sounds -- The examiner makes the specified letter sounds and the child identifies them.

   b. Vowel sounds -- The child is shown a group of single-syllable nonsense words (rop, sen). He is asked to read each of the words, first as if the vowel were long, then as if it were short.

c. Consonant blends and digraphs -- The child is asked to give the sounds of specified blends and digraphs.

d. Common syllables or phonograms -- The child is shown a number of syllables (oil, op, ell, etc.) and is asked to read them.

e. Blending -- The child is shown some words that are divided into syllables--cl-ide. First he is to read the two parts separately, and then together.

f. Letter sounds -- Isolated letters are shown to the child, who is then asked to make the corresponding letter sounds.

g. Initial consonant substitution -- A group of words is shown to the child. Following each word is a letter in parentheses--ball (f). The word is read to the child, and he is then asked to substitute the letter in parentheses for the first letter of the word (ball should then become fall).

h. Auditory discrimination -- Words that sound similar and words that are the same are read to the child in pairs--bin-tin, mice-mice, etc. The child is to tell the examiner whether the words are the same or different.

This test does require some practice. The publisher will sell it only to those it considers "qualified," even though it is neither difficult to administer nor to interpret.

Wide Range Achievement Test (WRAT)
Reading, Spelling, Arithmetic from Pre-School to College

Guidance Associates of Delaware
1526 Gilpin Ave., Wilmington, Del. 19806

The Wide Range Achievement Test, primarily designed to indicate a child's instructional level in the basic areas of reading, spelling, and arithmetic, can be given by the classroom teacher. It is frequently given in conjunction with the WISC, since the subtests do not overlap, and it is useful as a complement to other specific diagnostic instruments.

The 1965 edition of the WRAT (by J. F. Jastak, S. W. Bijou, and S. R. Jastak) is divided into Level I (five years to eleven years, eleven months) and Level II (twelve years to adulthood).

a. Reading — The child is asked to name letters and read words in isolation. His word-recognition skill is being diagnosed, not his reading comprehension.

b. Spelling — The child copies simple geometric marks, writes his name, and writes single words from a sequenced dictation list.

c. Arithmetic — The child counts symbols, reads numbers, solves a few problems orally, and finishes by doing as many written computation problems as he can.

There are a number of interpretive points to consider:

1. A child's test behavior in a diagnostic situation is more significant than the grade-level score. The way he holds his paper and the feelings and anxieties he communicates can be a very important clue to the tester.

2. The teacher should realize the great difference between word-recognition scores and comprehension. There is a significant diagnostic factor involved here, that is, often a child may do well mechanically yet not comprehend what he is reading.

3. It is therefore not uncommon for the WRAT reading score to be higher than the Gray Oral, since only one area or skill is being tested. Comprehension tests have many different interpretations.

4. A low reading score and a high arithmetic score indicate that the child has good reasoning ability even if he is a disabled reader. After all, reading is really only one medium of thinking. Reasoning in math may be undisturbed despite poor reading scores or ability.

5. There is evidence of relationships between the WRAT and the WISC. Often the WRAT arithmetic score is related to the WISC performance score, and the WRAT reading and spelling tend to compare with the WISC verbal. The breakdown often appears to be:

High scores	Low scores
WISC Comprehension	WRAT Reading
WISC Similarities	WRAT Spelling
WISC Performance	WISC Vocabulary
WRAT Arithmetic	WISC Information
Full-Scale WISC	

A child may be intelligent but perhaps underachieving because of a transcoding (central processing of all auditory input to allow good visual and motor output--or reverse) problem.

There are a number of items to look for in reading the diagnostic information:

1. Do patterns of substitutions, additions, or omissions carry over into spelling?

2. Does the reversal pattern carry over into arithmetic?

3. When attacking a word, what method did the child use? Did he spell it out by subvocalization? Sound it by syllables? Associate it with another word that looks similar and then rhyme it? Did he use his finger or his eyes to break the word into syllables?

4. When doing the arithmetic section, was there a difference between performance on problems presented horizontally and those displayed vertically? Were operational signs adhered to? Were computational problems approached from left to right, or right to left? Were fingers or sticks used to arrive at the answers, or did the child visualize while figuring? Did the child need constant reassurance? Did he stop when he was unable to do a problem, or could he skip it and go on to another?

5. Were errors in spelling phonetic? Nonphonetic? Did the child have to write sound by sound, or were many words on a visual recall level? Were

shorter and longer words attacked in the same way? Did using the word in a sentence help, or did it seem to distract the child from the word to be spelled? Did he print, or did he use cursive writing? Were there discrepancies between what the child said aloud and what he actually wrote?

6. Did the child seem "comfortable"? Was the effort extreme? Was he anxious to know "how did I do?"?

7. Were the score discrepancies great? Were there score similarities?

Test of Auditory Discrimination
1970 edition

Ronald Goldman, Macalyne Fristoe, and Richard W. Woodcock
American Guidance Service, Inc.
Publishers Building
Circle Pines, Minn. 55014

This test does several unique things and can be very useful to test children's responses to words presented in a standard manner against a background of quiet and a background of noise. The presentation in the standard manner requires a reel-to-reel tape recorder and high-fidelity earphones.

A careful teacher can be taught to administer the test. Since all the stimulus material is on tape, the individual tester's enunciation, inflection, and so on, do not influence results.

The test consists of three parts. Part 1, the Training Procedure, familiarizes the child with the word-picture associations to be used during the two subtests, so that one is not asking the child to discriminate a word he does not know. Part 2 is the Quiet Subtest, which measures auditory discrimination in the absence of background noise. Part 3, the Noise Subtest, measures auditory discrimination against distracting background noise.

Separate norms are provided for each subtest, ranging from four-month intervals at age three years, eight months, to five-year intervals at

seventy years and over. Types of errors are analyzed automatically on the response form so that one can tell if a child has difficulty in discriminating a particular kind of sound--voiced or unvoiced, plosive or continuent, and so forth. This analysis can also be useful in determining whether a child is particularly vulnerable when discriminating against a noise background. The noise used on the tape is a synthesis of school-cafeteria noise (a familiar auditory condition).

The test takes seven and a half minutes and can be given readily in a corner of a classroom that is free of distraction. Children seem to enjoy the test and find it challenging. It is particularly useful for the child of whom one says, "He doesn't pay attention." One can have perfectly normal hearing in the speech range, adequate ability to discriminate and differentiate sounds in quiet, and still fall very far below most agemates in capacity to discriminate, understand, and respond to sounds when there is noise and distraction. This rules out a good deal of school and life. The teacher's awareness of this can mean that the child's environment can be adapted to help him, lessening the frustration both of the child and the teacher.

This test can be easily interpreted to parents and helps round out the total picture of how to help a child at home as well as at school.

* * * * * * *

The auditory checklist that follows is a compilation of many different kinds of auditory lists. It is designed to help teachers understand <u>where</u> the child is having specific difficulty. The breakdown into initial consonants, final consonants, vowels, blending, rhyming, and memory has been found to be most useful.

When a pattern evolves, the teacher might discover, for example, that a problem with initial consonant sounds may be traced back to <u>specific</u>

articulatory or hearing difficulties, or that inability to repeat unrelated words may not mean as much as the child's inability to remember sentences that make sense. The teacher can then find materials that will help the child to overcome a specific problem or problems.

The checklist finds its origin in the ideas of others but has been compiled from materials used by Emily Boyd, educational consultant in Washington, D.C., and by Sherry Migdail.

Checklist for Testing Auditory Discrimination, Blending Ability, Rhyming, and Memory

(It is useful to speak the test into tape as you work with a child.)

I. Auditory discrimination

"I am going to say two words. You tell me whether they are the same or different. Cat - hat. Are these words the same or different?" (Be sure the child understands the directions before proceeding. If needed, give a few more examples.) Seat the child so that his back faces you and he cannot see your lips move. Do not give clues to the correct answer by vocal emphasis. Record responses appropriately. Call one pair at a time. Do not repeat more than once.

A. Initial consonants

	Same	Different
tip dip		
red red		
cheap jeep		
pin bin		
shin chin		
pal pal		
zip sip		
goat coat		
coast toast		

Initial consonants	Same	Different
feel veal		
noon moon		
yes yes		
bum dumb		
thin fin		
den ten		
peach beach		
fall fall		
cheap sheep		

B. Final consonants

rack rag		
leaf leave		
moon noon		
razz rash		
rip rib		
bus buzz		
run run		
cup cub		
had hat		
good good		
then then		
clay clay		
Ruth roof		
much mush		

Final consonants	Same	Different
seed seat		
big big		
cab cod		

C. Vowel discrimination

mat mat		
big beg		
odd add		
pin pen		
luck lock		
hid head		
leg leg		
cut cut		
lid led		
cup cap		
red red		

II. Auditory blending

Say each sound of the word separately, with a one-second pause after each sound. Ask the child to say what he thinks the word is. Repeat the sounds if he does not know the word. Say the three following words and ask which word it sounds most like. Underline the correct response.

1.	s - ee	(be	me	see)
2.	b - oa - t	(good	boat	doll)
3.	m - ai - l	(lame	same	mail)
4.	c - ar	(roll	rack	car)
5.	t - a - p	(trap	pat	tap)
6.	t - ea - m	(team	meat	mean)
7.	f - u - n	(fun	fan	find)
8.	b - a - g	(gab	bag	aggie)
9.	sh - o - p	(clap	push	shop)

10.	m	- u -	st	(must	mutt	muss)
11.	sp	- o -	t	(pot	stop	spot)
12.	gr	- a -	ss	(gas	grass	sag)
13.	str	- i -	p	(trip	strip	sip)
14.	l	- i -	t	(lift	lit	foot)
15.	c	- a -	mp	(cap	camp	map)

III. Rhyming

A rhyme is a word that sounds just like another word, except for the beginning: king - ring.

Tell me the name of a color that rhymes with bed.

Tell me the name of an animal that rhymes with hair.

Tell me the name of a flower that rhymes with nose.

IV. Auditory memory

A. Patterns -- Tap each of the following patterns under the table and ask the child to repeat it. Repeat the pattern if requested. Record the correct response by checking "Yes" or "No," and indicate if you had to repeat the pattern.

Pattern	Try 1		
	Yes	No	Repeated
1			
11, 11			
111, 111			
11, 1			
111, 111, 1			
11, 111, 1			
11, 1, 11, 111			
1, 11, 111, 11, 1			
11, 111, 1, 11, 1			

B. Nonsense syllables -- Say one line at a time and ask the child to repeat it.

gro
sham clup
gar del trob
yem clow brut
un dis ly per
ous ant tion cam

C. Unrelated words -- Say one line at a time and ask the child to repeat it.

come high
bug skip because
picnic tomorrow home
penny garden jacket thought
because radish enough turkey
bushel sentence purple whispering

D. Sentences -- Say one line at a time and ask the child to repeat it.

Come play ball with me.
Where is my clean sweater?
May I have a glass of milk?
See the cows in the cornfield.
The dog chased the cat up the tree.
The big yellow pencil needs to be sharpened.
The baby threw his rattle out of the carriage.
While I was skating, I fell down and scraped my knee.

III. DIAGNOSTIC REPORTS

The reports that follow are written about children we know or have known. Most of them are composite pictures. We have taken characteristics held in common by several children and grouped them for descriptive purposes. The procedures we follow are the same for each child: referral by a teacher; assessment and evaluation by the diagnostic teacher; conference with the classroom teacher, diagnostic teacher, administrator, and any other person who would be working with the child before any assigning is done; and finally a conference with the parents to let them know what we have done and what procedure we suggest.

If the child is to spend time in the diagnostic room, the parents are invited to visit it so that they may themselves understand their child's learning problems and be better prepared to follow the alternatives we suggest. For summers and vacations we recommend that the parents follow a "cookbook" (see Section IV) of activities with the child.

Reassessment is a continuous activity in which all the teachers who work with the child are frequently asked to participate in a child-study brainstorming session. It is useful to tape each session and replay it before the next one.

This section begins with individual reports on Carl, Linda, Peter, and Bob. We then describe group work with Linda, Peter, and Bob. We end with a retrospective report on Donald that describes his progress from nursery school to seventh grade.

These reports are not to be considered clinical. They are educational reports written for the use of all of us--staff, parents, and children.

Some of the children we describe have obvious learning problems; in others, problems are manifested more subtly. Most of these children function at an average or better than average intelligence measure, according to results on the Binet, WISC, Wechsler Preschool and Primary Scale of Intelligence, or McCarthy. While most of them want to do as well as they can, they become aware of their problems early and begin to feel that they are failures.

We include our full record in each case study. Some of the commercial games we mention are readily available. These games are often used in classrooms, but not to the fullest measure of their potential, for a game may go beyond the manufacturer's directions in the hands of an inventive teacher.

Carl Hopkins
Second grade
Age 7-5

I. Referral

In his winter report, Carl's classroom teacher wrote:

> Carl has difficulty perceiving order and ordering his work or himself effectively. It takes a great deal of energy and concentrated attention for him to assemble five pages right side up and in order.
>
> He understands the mechanics of reading but does not always understand or consider what he is reading. He manages direct comprehension questions--usually with fragmented responses. He is apparently unaware of the progression of events in a particular story or chapter. His frequent response is, "Do you know what happened?" His excitement is dampened when a friend points out all of the clues leading up to the conclusion.

Spelling is an erratic performance. Although his word attack skills are average, he does not always apply what he knows unless he is asked to take a second glance. "Oh, I remember. We studied that this week."

Mathematics. Each problem or math lab is approached as a unique or new experience. He does not see patterns or relationships--concrete or abstract. He has some number reversals: fourteen becomes 41, and sixteen is written as 61. I suspect he responds to the first word he hears and therefore he can write sixteen and 6_. Procedures and directions have to be repeated frequently. Sometimes he is preoccupied, and at other times he selects partial phrases or words from a direction. For example, "Turn the page. On this blank grid write the number 'two' in the upper left corner." Carl turned the page, glanced at the blank grid, turned the page over, and placed a 2 in the right-hand corner. What he heard was, "Turn the page. On this blank _____ write the number 'two' _____."

Sports. Carl is often chosen first in team play. He receives a good deal of criticism from teammates for failure to respond appropriately. "Don't stand there shouting 'good kick' when you should have caught the ball. Joe's on the other team!" He has trouble understanding directions and accepting limits.

Science. Carl enjoys using the microscope and materials that can be manipulated. He has difficulty confining himself to designated objectives. He is a good observer, but each observation remains a discrete, unrelated bit of information.

Art-workshop. Uses wood exclusively. Enjoys constructing

wood sculptures and boat-building. Prefers to work alone. Responds to needs of others and abandons his own project.

Music. Nonattentive, disruptive behavior. Interesting, creative experiments with instruments, but quickly loses sight of boundaries.

II. Assessment

The following tests were administered to Carl (see Section II for explanation of tests).

A. Illinois Test of Psycholinguistic Abilities -- to assess his preferred mode of learning

B. Goldman-Fristoe-Woodcock Test of Auditory Discrimination -- to assess his response to a noisy environment

C. Peabody Picture Vocabulary Test -- to assess his listening vocabulary

D. Spache Diagnostic Reading Scales -- to evaluate sight recognition of words, paragraph reading (both aloud and silently), reading and listening comprehension, and phonic skills

E. Wide Range Achievement Test (spelling subtest) -- to ascertain spelling patterns

III. Test performance

Carl came willingly to the diagnostic room and was curious about what the examiner did in the school. He was anxious about why he was being tested and asked how long it would take.

A. Illinois Test of Psycholinguistic Abilities

Mean scaled score	40	Mental age	7-11
Psycholinguistic age	7-9	Chronological age	7-5

Auditory reception	30	Grammatical closure	43
Auditory association	53	Visual closure	34
Visual reception	40	Auditory sequential memory	30
Visual association	44	Visual sequential memory	42
Verbal expression	30	Auditory closure	34
Manual expression	43	Sound blending	35

Verbal expression -- Carl spoke in long, continuous phrases; isolated thoughts were connected with "and." He frequently found himself at a loss for the "right" word and would conclude with, "Well, you know what I mean." His descriptions of the objects focused primarily on functional characteristics; mention of physical attributes was incidental.

Auditory sequential memory -- All of his errors were omissions and transpositions. He could only repeat a sequence of four numerals. Carl attempted to use the rhythm of the sequence to help recall the numerals, but became distracted by the rhythm, thereby losing numerical order.

Auditory association -- Carl's answers on this subtest were given without hesitation, and he was confident in the correctness of his answers.

Auditory reception -- Carl's low score on this subtest was the result of two things. First, his meager vocabulary reduced the possibility of sentence comprehension. He frequently asked about word meanings: "What is a hatchet?" Second, he confused the order of letter sounds in words. For example, when asked, "Do bugles camouflage?" he responded with, "Do mugles bamouflage? I don't know what you mean."

B. Goldman-Fristoe-Woodcock Test of Auditory Discrimination

Quiet subtest	47th percentile
Noise subtest	47th percentile

Carl's responses on this test were very slow; in fact, the tape often had to be stopped while he pondered his answer. During the noise subtest, Carl wrinkled his brow, rubbed his forehead, and complained of a headache. The tape had to be stopped numerous times as he tried desperately to recall the stimulus word.

C. Peabody Picture Vocabulary Test

Mental age 10-5

Carl enjoyed this test and performed well. Recognizing word meanings seemed much easier for him when a picture of the word was available. He seldom guessed, and indeed often refused to attempt to answer when there was uncertainty.

D. Spache Diagnostic Reading Scales

	Grade-level equivalent
Sight-word recognition	4.3
Oral reading	2.5
Silent reading	2.7

Sight-word recognition -- Carl read the words quickly, yet did not attempt to sound out unfamiliar words.

Paragraph reading -- Carl's ability to read paragraphs orally as well as silently was appropriate for his grade level. His comprehension was average, and he answered questions that dealt with both facts and inference. Carl's comprehension fell dramatically when the paragraphs were read to him. When visual reinforcement was not available and he had to rely entirely on listening, factual questions were difficult for him to answer and inferential questions were impossible.

Carl had difficulty identifying and recalling letter sounds when he had to listen to them. Vowel sounds were particularly troublesome. Letter-sound substitutions were difficult. For example, when he read the word bake and was told to substitute a c for the initial sound, he said cabe. Both the blending and common syllables subtests were trying for Carl. His reading of the consonant blends was below his grade level; he inserted a short-u sound between the consonants (br was sounded out as bur).

E. Wide Range Achievement Test (spelling subtests) -- Carl's errors reflected his difficulty with letter-sound associations. For example, he made the following errors: hem for him, cot for cut, mast for must, drass for dress, and night for light. His letter formations were good, and his spacing between each letter was accurate.

IV. Diagnosis

There are several reasons for Carl's need to have directions repeated:

A. Auditory stimulation is generally very distracting to Carl, and his

attention may easily be diverted from the teacher when directions are being given. "Noise" is not only distracting to Carl, but also causes him physical discomfort. Carl complained of a headache during the noise subtest of the Test of Auditory Discrimination.

B. Carl has trouble recalling what he has heard. If directions involve several steps, he is likely either to forget one of them or to perform the steps out of sequence.

C. Visual stimulation is also distracting to Carl. It may be necessary to maintain eye contact with him, touch his shoulders, and not have him face a distracting window. A view may divert his attention from class activities.

Carl's reading and comprehension skills are certainly acceptable for his grade level. His ability to recognize words by sight is excellent. Furthermore, he is able to acquire factual knowledge from what he has read. He does, however, rely too heavily on assistance from other people when he cannot read a word because:

A. He has difficulty differentiating among letter sounds, that is, whether they are isolated or within words.

B. Sounding out unfamiliar words is impossible because he cannot always remember what sound to give the letters.

C. Because of his difficulty with sound discrimination and letter-sound associations, Carl has not acquired phonic skills adequate to reading tasks.

Many of Carl's spelling errors are misrepresentations of vowel sounds in words. The same difficulties that affect his ability to sound out unfamiliar words also affect his spelling. That is, when he says dress, he is not sure whether he is hearing a short a or a short e in the middle position.

Carl has no difficulty associating words with their pictorial representation, for visual reinforcement helps him recall the meanings of the words. He does, however, have trouble thinking of the "right" words

with which to express himself. This may be a function of his difficulty in recalling what he has heard.

Summary

Strengths

Using the information he has acquired

Sight recognition of words

Reading comprehension

Associating words with their corresponding pictures

Remedial needs

Auditory recall

Filtering out distracting sounds

Raising tolerance for sound stimulation

Phonic skills: letter-sound discriminations and associations

Spelling

Screening out visual stimulation that may be distracting

V. Recommendations to the classroom teacher

A. Carl's difficulty in recalling what he has heard may interfere with his ability to follow directions. Therefore, directions should be reinforced by having him repeat them, and they should be short.

B. Carl will be more successful in spelling if he relies on "how words look" rather than on sequence of letter names. His visual recall is good and should be used. Depending on letter sounds for spelling may not be helpful to Carl because he has difficulty recalling letter sounds--letter-name associations.

C. Carl is very easily distracted by "noise" and by visual stimulation. He will be more likely to complete assignments if he can find a quiet and uncluttered area in which to work.

D. Carl should be encouraged to participate in some of these activities:

1. Word Teaching Game (Beckley-Cardy Co., 1900 N. Narragansett Ave., Chicago, Ill. 60639)

2. Spill and Spell (Parker Brothers, Salem, Mass. 01970)
3. Scrabble (Selchow and Righter Co., Bay Shore, N.Y. 11706)
4. Riddle, Riddle, Rhyme Time (Dexter and Westbrook, Ltd., Baldwin, N.Y. 11510)
5. Sight Word Concentration (see directions on page 39)

VI. Parent conference

The school began trying to reach Carl's parents soon after the testing referral was made, but without success. (The father is a prominent lawyer, and the mother is deeply involved in various social activities.) We proceeded with testing and continued our efforts to get in touch with Carl's parents. When we completed the testing, we decided to begin working with Carl in the diagnostic room, even though his parents had not been reached.

Carl's parents finally came to school in December, for the first time, to see the second-grade Christmas play. The assistant principal arranged a conference with them immediately following the play. The classroom teacher hurriedly found someone to take her class, and the diagnostician canceled some scheduled testing.

Carl's parents said they knew we had tried to reach them, but said that they had just been too busy to return our calls. They were interested in the test results and were surprised that Carl was having any difficulty in school. They could not make any connection between his school and home behavior because a governess took care of him. When asked if a "cookbook of home activities" would be helpful, they suggested that we send it to the governess. This was the last time Carl's parents were seen in the school this year.

VII. Recommendations to the parents

The following activities are meant to improve Carl's ability to recall what he has heard:

A. "Going to Mrs. Murphy's"

First person: "I'm going to Mrs. Murphy's and I'm going to buy an alligator."

Second person: "I'm going to Mrs. Murphy's and I'm going to buy an alligator and a banana."

Third person: "I'm going to Mrs. Murphy's . . ."

The game proceeds, with each person repeating the items from before (in order) and adding an item of his own, until the entire alphabet has been used.

B. Have Carl keep a diary, which may either be written or dictated into a tape recorder. Encourage him to recall his day's activities in the order in which they occurred.

C. Have Carl repeat sentences that get progressively longer. For example, "I saw a cat." "I saw a brown and white cat." "I saw a brown and white cat running." "I saw a brown and white cat running from a dog."

The following activities are meant to solidify Carl's knowledge of letter sounds:

A. "Detroit to Tokyo" -- You say a word. Then the next person must say a word that begins with the same sound that your word ended with:

First person: "apple"

Second person: "lamp"

Third person: "pear"

B. Riddle, Riddle, Rhyme Time -- "I am thinking of a word that starts like broke and rhymes with head." Answer: "bread."

C. "Sounds" (a stopwatch, egg timer, or watch with a second hand is needed) -- Have Carl close his eyes while you make a letter sound. He then has one minute to say all the words he can think of that have that sound in the beginning, middle, or end.

D. Board and card games

1. Scrabble

2. Phonic Rummy (Kenworthy Educational Services, Inc., Buffalo, N.Y. 14205)

3. Rhyming Ping-Pong (two players):

First person: "boy"

Second person: "joy"

The person who lasts longer is the winner.

The following activities are meant to improve Carl's spelling:

A. Sight Word Concentration -- Write each of Carl's spelling words on two separate index cards. Place the cards face down on a table or the floor. Each person takes a turn trying to find matching pairs. If a matching pair is found, the person must read the word and then he may keep the pair. If the person can also spell the word, he gets a second turn. The object of the game is to finish with the most pairs.

B. Have Carl make his own dictionary of word derivations. One good source is the two-volume Dictionary of Word and Phrase Origins, by William and Mary Morris (New York: Harper and Row, 1962).

C. Crossword-cubes games

D. Crossword puzzles, made with Carl's weekly spelling words

Linda Meyer
First grade
Age 6-1

I. Referral

Linda's classroom teacher referred her to the diagnostic room for testing because of her difficulty with forming letters and her apparently poor memory. The teacher wrote:

> Linda holds her pencil with an awkward grip and cannot work with scissors. During her free time, she usually chooses to listen

to a record or asks to be read to; she never goes to the painting easel by choice. Linda seems to have difficulty remembering some things. For example, yesterday, another child asked her where she had found a particular story book, and she could not remember. She often gets lost in the school building, even though she has been here for nursery and kindergarten. Linda does, however, remember directions that I give her verbally. When reading, she has no difficulty with phonics, but she sounds out every word she reads, even when it is one like "got" that she has seen repeatedly. Linda frequently speaks about her experiences at the family farm and enjoys dictating stories from the Paddy Pork books.

II. Assessment

The following tests were administered to Linda.

A. Illinois Test of Psycholinguistic Abilities -- to assess her visual and auditory communication skills

B. Developmental Test of Visual-Motor Integration -- to evaluate her ability to reproduce simple designs that she sees

C. Children's Embedded Figures Test -- to ascertain her ability to extract the picture of a specified object from a cluttered background

D. Woodcock Reading Mastery Tests -- to evaluate letter recognition, sight recognition of words, word-attack skills, word comprehension, and passage comprehension (this subtest was read to Linda).

III. Test performance

A. Illinois Test of Psycholingustic Abilities

Mean scaled score	45	Mental age	8-9
Psycholinguistic age	8-4	Chronological age	6-1

Auditory reception	59	Grammatical closure	47
Auditory association	56	Visual closure	36
Visual reception	42	Auditory sequential memory	46
Visual association	42	Visual sequential memory	32
Verbal expression	48	Auditory closure	39
Manual expression	37	Sound blending	40

While five of Linda's subtest scores deviated significantly from her mean scaled score, the only tests discussed here are those for which there was pertinent observable behavior.

Auditory reception -- Rather than answering with a simple "yes" or "no," Linda gave reasons for her answers and frequently defined the words being used by the examiner. Examiner: "Do wingless birds soar?" Linda: "How can they soar into the sky if they don't have wings?" Examiner: "Do bugles camouflage?" Linda: "Usually they don't, but if you had one that was painted brown, you could camouflage it in the trees."

Visual closure -- Linda was distracted, yet she was able to identify parts of objects once she found them in the clutter. She commented, "Someone has a very messy room!" Her scanning was haphazard; at times she began from the left, at other times from the right.

Visual sequential memory -- Although Linda was able to label the tiles on this subtest, she could not recall the sequences. She became very tired and frustrated. She could only reconstruct a series of four tiles.

Manual expression -- Linda was self-conscious during this subtest. Her movements were rigid and her performance disorganized. In acting out her response to "Linda, show me what you do with eggs and an egg beater," she beat the eggs with the egg beater and then cracked the eggshells and emptied the eggs into the bowl.

B. Developmental Test of Visual-Motor Integration

Visual-motor integration age equivalent 5-0

Linda worked consistently with her right hand during this test. She drew horizontal lines from right to left and vertical lines from bottom to top. She was aware of the inaccuracies in some of her reproductions and asked if she could recopy them; her second attempts

were often better. She had difficulty reproducing more than two intersecting lines. For example, Linda was very persistent in trying to copy and , yet was not able to reproduce them accurately.

Her visual-motor integration age equivalent was consistent with her chronological age.

C. Children's Embedded Figures Test

In the demonstration part of this test, Linda was given a wooden triangular figure (representing a tent) to examine. She was then shown a page of four triangles, each varying in size and proportion. Her task was to match the wooden triangle with the closest corresponding pictured triangle. She completed this part of the test with ease.

Linda was then asked to locate triangular forms hidden within various pictures. For example--Examiner: "Find the tent shape hidden in this picture": She was tense from the beginning and complained of a stomach ache. She was able to find the tent shape embedded only in the first test picture, and the testing was discontinued after the eleventh item.

D. Woodcock Reading Mastery Tests

	Grade-level equivalent
Letter recognition	1.4
Word identification	1.7
Word attack	3.4
Word comprehension	1.5
Passage comprehension	---

Letter recognition -- Linda's ability to recognize letters was appropriate for her grade level. She was able to identify most lower- and upper-case letters that were written in manuscript. However, a lengthy

pause preceded identification of the letters b, d, g, q, and p, and she could only identify those cursive letters that resembled their manuscript counterparts.

Word identification -- Linda read very few words as whole words. She labored with sounding out those she should have recognized by sight. For example, he was sounded out.

Word attack -- Linda was able to sound out most of the single-syllable nonsense words, but had more difficulty with those having two or more syllables. She spent an excessive amount of time sounding out syllables. For this reason, her high score does not indicate an accurate evaluation of her performance; if her reading were timed, she would have great difficulty in keeping up with her group.

Word comprehension -- Linda's ability to read silently and fill in missing words on the word comprehension subtest was appropriate for her grade level.

Passage comprehension -- Linda could not read passages to herself, so a grade score could not be given. The test was then read to Linda by the examiner, making an informal evaluation of her listening comprehension possible. She answered quickly and was able to fill in the missing words quite well.

IV. Diagnosis

Linda is very much aware of her "auditory environment." She seeks information through listening and is able to comprehend and use what she has heard. In conversing with Linda, one is immediately impressed, not only with her listening comprehension, but also with her use of words. Her ability to recall and organize information is excellent, as demonstrated on the auditory association subtest of the Illinois Test of Psycholinguistic Abilities. Her rote recollection of what she has heard is also good.

Linda's ability to discriminate among and use letter sounds is adequate, but phonics have been emphasized to such an extent that she sounds out almost every word she reads, even those she knows on sight. Her sight recognition is limited, and the energy she expends in sounding out familiar words is excessive. This appears to be a function either of weak visual sequential recall or of poor teaching. Her inability to

remember how to get from one place to another in a familiar setting is not surprising. This was also reinforced during the manual expression subtest, in which she could not recall the sequence involved in performing a simple task.

Linda has trouble finding her place on a printed page. She is very easily "bombarded" with visual stimulation and functions best in a setting that is uncluttered. Her distractibility was clearly revealed in the visual closure subtest of the ITPA and in the Children's Embedded Figures Test. Test results were substantiated by the teacher's observation that Linda "often gets lost in the school building even though she has been here for nursery and kindergarten." It is hard for Linda to organize her visual surroundings, and she has difficulty finding things that are easily located. Lack of organization has also hindered development of good visual recall.

Linda's fine motor control is weak, and she is aware of the discrepancy between her ability to write, cut, paste, and paint and that of her classmates. This awareness apparently contributes to her hesitancy about painting and other tasks requiring fine motor control. Although she is able to identify her left and right hands confidently, she draws lines from right to left and from bottom to top. This can easily be corrected through retraining. Linda works consistently with her right hand.

Summary

Strengths

Listening skills: acquiring and using much information through listening

Remembering what she hears

Knowledge and use of letter-sound associations

Listening and functional vocabulary

Remedial needs

Fine motor control

Visual recall: sight recognition of words

Screening out visual stimulation that may be distracting

V. Recommendations to the classroom teacher

A. Linda should be strongly urged not to sound out words. She should also be encouraged to read faster.

B. Linda should be encouraged to use a marker when reading so that she will not lose her place.

C. Linda is very easily distracted by visual stimulation and should therefore work in a fairly uncluttered part of the classroom.

D. Linda could keep a daily diary by dictating into a tape recorder. She should be encouraged to talk about things she has seen.

E. When Linda is trying to learn directions, have her repeat them for auditory reinforcement.

F. "Cleanup" time is useful time for Linda. Have her straighten a particular shelf and be responsible for its organization and maintenance.

G. During free time, encourage Linda to work puzzles, solve simple mazes, unscramble words with which she is familiar, and find hidden pictures.

VI. Parent conference

Mr. and Mrs. Meyer were asked to come in for a conference with Linda's classroom teacher, the diagnostic teacher, and the assistant principal. At the conference, the classroom teacher enumerated the concerns that had led her to refer Linda for testing. Mrs. Meyer related similar concerns and said that she had wondered about Linda's lack of interest in drawing and noticed that Linda often misplaced her belongings.

The diagnostic teacher explained the testing. The assistant principal suggested that the test results and the home behavior about which Mrs.

Meyer was concerned might be related. Here was an area where school and home could work closely.

At the close of the conference, the classroom teacher and the diagnostic teacher offered to compile a "cookbook" of recommended home activities for Linda.

VII. Recommendations to the parents

This is the "cookbook" given to Linda's parents:

A. Sight Word Concentration (index cards needed for this game)-- Write basic sight words (the, and, this, who, will, etc.) on the cards, two cards for each word. Place the cards face down on a table or the floor. Each person takes a turn trying to find matching pairs. If a matching pair is found, the person must read the word and then he may keep the pair. If he can read the word as a whole word, he then gets a second turn. This game can be varied by using pictures of similar objects.

B. Have Linda look at a picture, then take the picture away. See how many of the items she can remember from the picture.

C. While driving to the farm -- "Guess what I just saw." That person must then describe what he saw, giving minimal clues, and others try to guess what the object was.

D. Have Linda keep a daily diary by dictating to you her daily experiences. Encourage to sequence her recollections.

E. Help Linda work out very specific directions for getting to the farm, school, the grocery store, and other places.

F. "Three Changes" -- Two people face each other and look very carefully at each other for one minute. Then they turn their backs and make three changes on their person. They face each other again and try to guess what changes were made. This game can be varied by having the players make changes in a room while the other person leaves or by making changes in words. For example, "What three changes did I make to get quart from cat?" -- cat to cart (change 1) to cuart (change 2) to quart (change 3). Any of the words other than those at the beginning and the end may be nonsense words.

G. Junior Scrabble (Selchow and Righter Co., Bay Shore, N.Y. 11706)

H. Place objects commonly used around the house in a row. Have Linda close her eyes while you rearrange them. See if she can reconstruct the original order. Then have her do the same with you. When she can do this well, show each other rows of word cards.

I. Scan (Parker Brothers, Salem, Mass. 01970) -- a game of matching geometrics

The following activities are meant to improve Linda's fine motor control:

A. Clay work -- making letters, numbers, words, and sculptures with plasticine

B. Tracing dot-to-dot pictures

C. Mazes for Fun, by Vladimir Koziakin (New York: Grosset and Dunlap, 1973)

D. Designs to Color, by Betty Schaffner (Los Angeles: Price/Stern/Sloan, Inc., 1967)

E. Tracing templates -- Stencils for Tracing (Ideal School Supply Co., Oak Lawn, Ill. 60453)

F. Water colors -- finger-painting letters, numbers, and pictures

G. Sorting beads, coins, etc. Egg cartons are useful for this. Have Linda work out her own method of organization, then encourage her to explain her method.

H. Etch-a-Sketch (Ohio Art, Bryan, Ohio 43506)

I. Sewing cards

J. Pick-up sticks

K. Have Linda make a scrapbook by cutting pictures out of magazines and then pasting them into a notebook. Allow her to organize the book as she wishes.

L. It may be fun for Linda to learn how to sew things that do not call for a sewing machine. She could learn to make patchwork pillows, for instance.

The following activities should help Linda learn to screen out visual stimulation that may be distracting.

A. Show Linda a page from one of her books. In one minute, see how many a's (or other specified letters) she can find. Encourage her to scan the page as if she were reading, that is, from left to right.

B. Mazes for Fun, by Vladimir Koziakin

C. Bingo

D. Puzzles

E. Magazines such as Highlights for Children and Sesame Street, which have hidden picture puzzles

F. Show Linda a picture. See how many objects she can find that begin with a specified letter. Once she is comfortable with this, set a time limit of one minute.

G. Treasure hunt

H. "How many words can you make, using the letters in 'Thanksgiving'?"

I. Unscrambling simple words -- If tca is rearranged, you spell cat.

J. Recreating designs that have been drawn on graph paper on geoboards

VIII. Diagnostic procedure

We decided to have Linda work in a small group with Bob and Peter, for she needed the reinforcement of their interest in her and in her ability to work well with others.

Peter Dubrowski
First grade
Age 6-8

I. Referral

During the first week of the school year, the diagnostic teacher went to Peter's classroom and said to his teacher:

> Last year the other diagnostic teachers and I gave all kindergartners the Wepman Auditory Discrimination Test and the Slingerland Pre-Reading Test to see if we could accurately predict which children would have difficulty with reading-related activities in first grade. Peter had no difficulty with any of the subtests on the Slingerland, but he made 16 errors on the Wepman--eight more than he should have made for his chronological age. I would like to schedule Peter for a complete battery of tests. It may be advisable

for us to work with him this fall. We will determine that when we see his test results.

The classroom teacher said that Peter had had no problem with reading activities so far and was indeed performing well. However, the diagnostician persisted and succeeded in scheduling him for testing.

II. Assessment

The following tests were administered to Peter:

A. Illinois Test of Psycholinguistic Abilities -- to determine Peter's preferred mode of learning

B. Draw-a-Man -- to assess Peter's perception of body image and his ability to reproduce it

C. Goldman-Fristoe-Woodcock Test of Auditory Discrimination -- to have some check on the Wepman Auditory Discrimination Test given the previous spring

D. Developmental Test of Visual-Motor Integration -- to evaluate his ability to reproduce geometric forms

E. Wide Range Achievement Test -- to spot-check specific skills, especially word recognition and phonic patterns in spelling

F. Gray Oral Reading Test -- to see if Peter's word-recognition ability extended to reading paragraphs

III. Test performance

A. Illinois Test of Psycholinguistic Abilities

Mean scaled score	40	Mental age	8-2
Psycholinguistic age	7-11	Chronological age	6-8
Auditory reception	40	Grammatical closure	38
Auditory association	42	Visual closure	36
Visual reception	36	Auditory sequential memory	50
Visual association	38	Visual sequential memory	50
Verbal expression	42	Auditory closure	32
Manual expression	33	Sound blending	30

Peter achieved a mean scaled score of 40 on the ITPA, and all of his scores, with the exception of five, were within four or five

points of his mean. Those subtests for which there was important observable behavior are discussed here.

Auditory and visual sequential memory -- Peter's scores for these two subtests deviated most significantly from his mean, in that both were 10 points above his mean. He seemed to enjoy taking both of these subtests and regarded them as games. Peter labeled the tiles on the visual sequential memory subtest as telephone poles. There was no consistent pattern of errors on either of these subtests.

Auditory closure -- Peter's score was eight points below his mean. When he was unsure of an item, he chose not to hazard a guess.

Verbal expression -- Peter explored the stimulus objects (nail, ball, block, envelope, and button) for this subtest kinesthetically. He described textures, shapes, and sizes accurately. He was primarily concerned with the functions of the objects. He spoke in complete sentences, connecting related sentences and phrases with appropriate conjunctions. For example, as he described the button, he said, "You can roll it because it is circular on the outside." He gave considerable thought to each of his statements, and this subtest took 30 minutes to administer. Peter neither grew tired nor anxious, and he clearly enjoyed the experience.

B. Draw-a-Man

Peter drew his picture very rapidly. The man had two legs and two outstretched arms. The face had smiling lips, a nose, and two eyes opened wide. There was abundant hair on the head. Peter related an involved story about a man who liked to pick other people's flowers. One day the man was confronted by a neighbor who asked him why he did such an awful thing. He answered, "I'm not going to any more because I'm growing my own flowers. Now I won't have to pick other people's." Peter's story had a well-developed plot, and he spoke in coherent sentences.

C. Goldman-Fristoe-Woodcock Test of Auditory Discrimination

Quiet subtest	42nd percentile
Noise subtest	61st percentile

The background noise on the noise subtest made it difficult for Peter to hear the stimulus words. He frequently asked if the item could be repeated, but showed no signs of physical discomfort.

D. Developmental Test of Visual-Motor Integration

Visual-motor integration age equivalent 6-10

Peter accepted this test neither as a chore nor a pleasure, but simply as an assignment that needed to be completed.

E. Wide Range Achievement Test

Reading grade score	2.0
Spelling grade score	1.8
Arithmetic grade score	2.1

Reading -- Peter made many of his errors by giving the wrong sound to vowels: for letter he read litter, and for block he read black. He read the words quickly.

Spelling -- Many of Peter's errors were confusion of vowel sounds. For example, he spelled will and cut as well and cat.

Arithmetic -- Peter worked quickly and stopped, with confidence, when he no longer understood the problems.

F. Gray Oral Reading Test

Grade score 1.6

Peter's reading was word-by-word, but with few errors. He read slowly, laboring over unfamiliar words until he could read them. He was able to answer comprehension questions that dealt with both facts and inferences.

IV. Diagnosis

Peter uses language well. He expresses his ideas concisely and speaks only when he feels that he has an important point to make. His sentences are neither choppy nor run-on; related ideas are connected, and unrelated

ideas remain separated. Peter has a good speaking and listening vocabulary.

Despite his difficulty with letter-sound discrimination, Peter has learned to read. His sight recognition of words is adequate, and he is able to sound out unfamiliar words sufficiently well to get semantic cues. Even when he does assign incorrect sounds to a letter, he is able to correct himself on the basis of the contextual meaning of a word. Sound discrimination has not yet significantly affected his spelling, and it exceeds first-grade level.

Summary

Strengths

Verbal expression

Reading

Rote memory (auditory and visual; see comment on ITPA sequential memory tests, page 50)

Remedial needs

Letter-sound discrimination skills

V. Recommendations to the classroom teacher

A. Peter should come to the diagnostic room for 45 minutes daily. Our emphasis will be on sound discrimination.

B. Peter may benefit from playing the following games during his free time:

1. Phonic Rummy (Kenworthy Educational Service, Inc., Buffalo, N.Y. 14205)

2. Phonic Go Fish (Remedial Education Press, 2138 Bancroft Pl., N.W., Washington, D.C. 20008)

3. Sea of Vowels (Ideal School Supply Co., Oak Lawn, Ill. 60453)

4. Word Teaching Game (Beckley-Cardy Co., 1900 N. Narragansett Ave., Chicago, Ill. 60639)

C. Peter will continue to progress in reading if a combined language-experience, sight-word, and phonics approach is used.

Even though Peter's classroom teacher did not feel that he needed help in the diagnostic room, she was perfectly willing to set up a time for him to join a small group.

VI. Parent conference

Mrs. Dubrowski came to school for a conference with Peter's classroom teacher and the diagnostic teacher. His teacher described his classroom performance and behavior. The reasons for testing and the test results were then discussed by the diagnostic teacher. Mrs. Dubrowski was delighted to hear how well Peter was doing and that his remedial needs were minimal. His work in the diagnostic room was described, and Mrs. Dubrowski was invited to visit any time she wished. At the close of the conference, the diagnostic teacher said that a list of recommended games to be played at home would be provided.

VII. Recommendations to parents

The following activities are meant to solidify Peter's knowledge of letter sounds:

A. "Detroit to Tokyo" -- You say a word. Then the next person must say a word that begins with the same sound that your word ended with:

First person: "apple"

Second person: "lamp"

Third person: "pear"

B. Riddle, Riddle, Rhyme Time (Dexter and Westbrook, Ltd., Baldwin, N.Y. 11510) -- "I am thinking of a word that starts like broke and rhymes with head." Answer: "bread."

C. "Sounds" (a stopwatch, egg timer, or watch with a second hand is needed) -- Have Peter close his eyes while you make a letter sound.

He then has one minute to say all the words he can think of that have that sound in the beginning, middle, or end.

D. Board and card games

1. Phonic Rummy
2. Phonic Go Fish
3. Junior Scrabble (Selchow and Righter Co., Bay Shore, N.Y. 11706)
4. Sea of Vowels

VIII. Diagnostic procedure

Despite the objections of Peter's classroom teacher, the diagnostic teacher wanted to schedule him to work with Bob and Linda, for their remedial needs were complementary. The teacher reluctantly agreed to have Peter join the group.

Bob Jurgenson
First grade
Age 6-2

I. Referral

Bob's classroom teacher wrote:

> Bob discourages every attempt I make to help him by his inattention. He can hear perfectly well, but he won't follow directions. Most of the time he doesn't listen for an entire direction because his attention has been diverted by a sneeze or a cough. The slightest movement within the classroom captures his interest at that moment, and he can't recall or reconstruct any fragment of the instruction. Printed instructions aren't satisfactory, either. He has difficulty reading them. When I assist him, he still can't get himself in gear.

Language arts. Bob has a limited vocabulary. He seems to have some difficulty remembering what he has heard and seen. While working with the word family of ow, he couldn't remember having heard the phrase "How now, brown cow?" the previous day, even though 19 other children remembered part or all of it. He is at the bottom of the class in reading. His letter-sound associations are poor and often incongruous. Sight-word recognition is limited as well as unpredictable. He transposes or omits when he is able to identify any part of the word. Moreover, he seems to have little interest in learning. When I hold him back from sports or workshop or use his free time so that he can finish his work, he seems to resent the extra time I am giving him.

Mathematics. Bob doesn't respond to group instruction in mathematics. If we are using Cuisenaire rods, he is able to construct a train of rods, for example, three light-green rods. If he is asked to find one rod that is the same length as the three light-green rods, he will extract three blue rods. He is confusing "number" with "numberness." Subtraction problems are a better indication of his developmental lag. If I remove blocks from a set, he insists that the original set number is constant. Why? "Because you got them in your hand." After repeated experiences, he got the idea we were talking about with the blocks remaining on the table. The next day the subtraction success had dissolved into think air, and we started over again. Common-sense reasoning escapes him, too.

Music. Bob has little interest in music. He is usually playing with the chair ahead of him or investigating some part of an instrument. It is difficult to involve him in rhythmic activities.

Workshop. Usually he works alone. He likes to build "things that work." Bob is interested in how things work, and his constructions usually have moving parts.

Sports. In the classroom, Bob has a neutral attitude toward anything and everything. During sports period, a metamorphosis occurs. He is extremely active and involved--both with the activity and people.

Science. If Bob can actively manipulate materials, he becomes involved in the science room. He can show us what he is doing, but he has difficulty explaining what he is investigating or observing. He is distracted by numerous sounds in the science room. It is curious to me that this child cannot imitate any of the animal sounds he responds to.

II. Testing

The following tests were administered to Bob.

A. Illinois Test of Psycholinguistic Abilities -- to assess his preferred mode of learning

B. Goldman-Fristoe-Woodcock Test of Auditory Discrimination -- to assess his ability to discriminate among sounds in noise and in quiet

C. Peabody Picture Vocabulary Test -- to assess his listening vocabulary

D. Developmental Test of Visual-Motor Integration -- to evaluate his ability to perceive and reproduce geometric forms

E. Wide Range Achievement Test -- to spot-check specific skills, especially word recognition and phonic patterns in spelling

III. Test performance

A. Illinois Test of Psycholinguistic Abilities

Mean scaled score	36	Mental age	6-2
Psycholinguistic age	6-1	Chronological age	6-2

Auditory reception	50	Grammatical closure	34
Auditory association	30	Visual closure	33
Visual reception	38	Auditory sequential memory	30
Visual association	41	Visual sequential memory	36
Verbal expression	30	Auditory closure	35
Manual expression	36	Sound blending	36

Following are descriptions of those subtests for which there was important observable behavior.

Auditory reception -- There was a 20-point discrepancy between Bob's score on this subtest and his score on the auditory association subtest. During the latter, he was restless and was distracted by voices in the hall.

Manual expression -- Bob enjoyed taking this subtest and wanted to play Charades immediately afterwards. His movements were precise, and he took great care with such details as replacing the cap on the toothpaste tube. Bob's score on the verbal expression subtest fell six points below his mean. Most of the information that he gave dealt with functional rather than physical attributes. He spoke in short phrases, not complete sentences. He asked several times to demonstrate how he might use a ball, seeming to prefer demonstration to verbal expression.

Auditory and visual sequential memory -- On these two subtest, Bob's errors were transpositions and omissions. He did not attempt to label the tiles on the visual sequential memory subtest, but relied entirely on recalling the visual image of the geometric form. On both the visual sequential memory and visual closure subtests, Bob's scanning was haphazard, with very little left-to-right eye movement.

Auditory closure -- Bob's errors on this subtest were omissions, such as ant for ele/ /ant and market for / /uper/ /arket.

Sound blending -- Many of Bob's responses on this subtest were completely different in sound from the stimulus word; for example, he responded to d-i-nn-er with mat.

B. Goldman-Fristoe-Woodcock Test of Auditory Discrimination

Quiet subtest	67th percentile
Noise subtest	55th percentile

Bob commented that the noise on the noise subtest hurt his ears. He was able to describe thoroughly the background noise.

C. Peabody Picture Vocabulary Test

Percentile score 97th percentile

Many of the questions on this test required considerable thought before an answer was forthcoming. Bob was amused by the pictures, chuckling frequently.

D. Developmental Test of Visual-Motor Integration

Visual-motor integration age equivalent 5-3

Bob was tense and uncomfortable and copied the designs rapidly and carelessly.

E. Wide Range Achievement Test

Reading grade score	1.2
Spelling grade score	1.0
Arithmetic grade score	2.0

On the reading subtest, Bob could only read two words (cat and to) and the alphabet. Examples of his spelling errors: og for go, nin for in, and b for boy. Bob took much greater care with the arithmetic subtest than with the other two. It seemed to make him less anxious.

IV. Diagnosis

The 20-point discrepancy between Bob's score on the auditory reception and auditory association subtests of the Illinois Test of Psycholinguistic Abilities indicates that Bob is not organizing information he receives by hearing.

Although Bob's listening vocabulary appears more than adequate, according to the Peabody Picture Vocabulary Test, he does not retain information. He spends a disproportionate amount of energy "checking up" on the many sounds in his environment, so that he does not have time to organize information.

His visual recall is satisfactory. He is able to imitate movements

to describe the uses of specific objects, as evidence by the ITPA manual expression subtest. When asked how to perform a task, Bob is able to demonstrate, but a verbal explanation of the same task is very difficult for him. He frequently acts out the meaning of words and then asks, "What is the word for that?" The discrepancy between Bob's listening and speaking vocabularies is significant. He does not have sufficient recall to use words that he comprehends fluently. Although Bob's score of 30 on the ITPA auditory sequential memory subtest was reasonably close to his mean scaled score of 36, it was low enough to warrant attention. He did not use the "rhythm" of the number sequence to help him recall the sequence.

Bob is a quiet person; when he speaks, he uses short phrases rather than complete sentences. He responds more quickly to directions delivered in short phrases than to those in longer sentences. Too much sound stimulation frustrates him and hinders his comprehension.

The following areas need to be strengthened to help Bob learn to read:

A. Identifying sounds within his environment so that letter sounds can be attributed to the appropriate letters when he is sounding out words

B. Strengthening auditory recall to help him recall letter sounds and improve his verbal fluency

C. Training to screen out auditory stimulation, which begins to "bombard" him and cause discomfort

D. Extending his language experiences to encourage him to use words; a language-experience approach with his own stories to reinforce skills and motivate reading

V. Recommendations to the classroom teacher

A. Bob should sit in a quiet, uncluttered area when he is working to lessen his need to "check up" on various sounds.

B. A structured phonetic approach where sounds are taught in isolation may be difficult for Bob at this time. It may be useful for him to play such games as Phonic Go Fish and Phonic Rummy.

C. When the class begins to work on short-vowel sounds, post pictures that will help Bob recall the vowel sounds. For example:

a		apple
e		egg
i		igloo
o		octopus
u		umbrella

Lydia A. Duggins, Developing Children's Perceptual Skills in Reading, 2nd ed. (Westport, Conn.: Mediax, 1971), is recommended. In this book (pp. 44-47), a story is told about a boy named Ed and a girl named Edna. A number of exercises involving the short-vowel sounds accompany this story. Meaning is reinforced. For example:

Ed is at his chair.
Ed is on the edge of his chair.
Ed is standing on his chair.
Ed is under his chair.
Ed is sitting in his chair.

D. Encourage Bob to make a picture dictionary. He can cut pictures out of books, paste them into his notebook, and then label them. He may even dictate stories about the content of the pictures.

E. Since Bob should speak more often in class, encourage him to explain his ideas in words rather than demonstrating them in actions.

F. Pantomime is easy and enjoyable for Bob and offers him success. This may be a good class activity:

1. Have the class sit on the floor in a circle. The center of the circle is an imaginary body of water. Tell the children that they are to pretend to be something moving in the water. They may not speak; they are to use their bodies. The rest of the class guesses. Variation: they are to pretend that they are the water in motion, and the class guesses what it is that is making the water move.

2. After several children have had a turn with the above, have the children sit with their legs crossed and their hands folded in their laps. This time, they are to describe verbally something that is in the water or something that is making the water move. No manual clues may be given; only words may be used.

G. When directions are being given to the class, have Bob repeat them in the order in which they were given. This will help him recall what was said.

VI. Before the parent conference

The classroom teacher, the assistant principal, and the diagnostic teacher decided to have Bob join a small group in the diagnostic room for 45 minutes daily. According to what we knew about the group, their learning patterns were similar. The emphasis was to be on (1) developing a program to encourage and promote better listening; (2) encouraging verbal language experiences as a prerequisite to a reading program; and (3) undertaking a reading program based on each child's individual needs.

VII. Parent conference

Mr. and Mrs. Jurgenson were delighted that Bob had been evaluated, since they were also concerned that he was not interested in learning to read. They had noticed that Bob generally preferred to say, "Let me show you," instead of explaining his thoughts, but they thought that this was appropriate for his age. Mrs. Jurgenson expressed frustration with Bob's apparent "unwillingness" to follow directions and was delighted to find out that he was not being obstinate.

They were informed of our plans to work with Bob in the diagnostic room daily for 45-minute periods.

We recommended that the Jurgensons come to visit his class as well as the diagnostic room. When they asked what could be done at home, we told them that a "cookbook" of activities would be compiled. The conference closed with Mr. and Mrs. Jurgenson apparently being relieved that their concerns for Bob could be dealt with.

VIII. Recommendations to parents

In the "cookbook" of home activities for Bob, the following activities are recommended for improving Bob's ability to recall what he has heard:

A. "Going to Mrs. Murphy's"

First person: "I'm going to Mrs. Murphy's and I'm going to buy an alligator."

Second person: "I'm going to Mrs. Murphy's and I'm going to buy an alligator and a banana."

Third person: "I'm going to Mrs. Murphy's . . ."

The game proceeds, with each person repeating the items from before (in order) and adding an item of his own, until the entire alphabet has been used.

B. Have Bob keep a diary, which may either be written or dictated into a tape recorder. Encourage him to recall his day's activities in the order in which they occurred.

C. Have Bob repeat sentences that progressively longer. For example, "I saw a cat." "I saw a brown and white cat." "I saw a brown and white cat running." "I saw a brown and white cat running from a dog."

D. Have Bob learn songs that get progressively longer: "I Knew an Old Lady," "This is the House that Jack Built," "The Cabin in the Woods," "The Green Grass Grows All Around."

E. Say three or four words to Bob and have him repeat them to you in alphabetical order.

F. Clap out a rhythmic sequence and have Bob repeat it.

G. Give Bob only a few directions at a time and have him repeat them to you.

These activities should strengthen Bob's letter-sound discrimination:

A. "Detroit to Tokyo" -- You say a word. Then the next person must say a word that begins with the same sound that your word ended with:

First person: "apple"

Second person: "lamp"

Third person: "pear"

B. Riddle, Riddle, Rhyme Time (Dexter and Westbrook, Ltd., Baldwin, N.Y. 11510) -- "I am thinking of a word that starts like broke and rhymes with head." Answer: "bread."

C. "Sounds" (a stopwatch, egg timer, or watch with a second hand is needed) -- Have Bob close his eyes while you make a letter sound. He then has one minute to say all the words he can think of that have that sound in the beginning, middle, or end.

D. Board or card games

1. Phonic Rummy (Kenworthy Educational Service, Inc., Buffalo, N.Y. 14205)

2. Phonic Go Fish (Remedial Education Press, 2138 Bancroft Pl., N.W., Washington, D.C. 20008)

3. Junior Scrabble (Selchow and Righter Co., Bay Shore, N.Y. 11706)

4. Sea of Vowels (Ideal School Supply Co., Oak Lawn, Ill. 60453)

The following activities should help Bob organize information in his mind:

A. While driving in the car, have each person (except the driver!) close his eyes. Then take turns talking about what is heard. For example, "I hear something that sounds like a tractor. It may be a farmer working in the field." A discussion can follow as to what types of crops are grown in the area, the purpose of plowing the fields, and so on.

B. Have Bob make a tape recording of various sounds around the house. On a piece of paper, make five columns with these headings: "Loud sounds," "Soft sounds, "Pleasant sounds," "Unpleasant sounds," and "Funny sounds." Then have Bob categorize his taped sounds according to these headings. Some days, he may just want to find a particular sound. Categories can be expanded to include "Busy sounds," "Relaxing sounds," "Serious sounds," and so forth.

The following activities will improve Bob's verbal fluency and competency:

A. Have Bob keep a diary that is on tape rather than written. He will be interested in hearing his own voice as well as the changes in his tone when he is talking about something that changes his mood.

B. Game -- "How many different ways can you ask someone to do something?" Examples: "It's time for dinner." "If you don't come to dinner, I'll eat your serving!" "Dinner is getting cold!" "Come on, you're holding up dinner!" "Planning on eating dinner?" "Please come to dinner!" "We'd love to have you join us for dinner, NOW!"

C. Twenty Questions -- "I'm thinking of . . ." Each person may ask 20 questions that can be answered with "yes" or "no."

D. A tape recorder is a useful device for monitoring progress.

IX. Diagnostic procedure

The classroom teacher, diagnostic teacher, assistant principal, and parents all agreed that Bob should work in the diagnostic room for 45 minutes daily with a small group. The classroom teacher and diagnostic teacher agreed on a time, 10:45 a.m., which would allow Bob to be with his class for certain important periods such as language arts, science, math, and sports.

This schedule worked well for about two weeks. Then Bob began coming in with hesitation and complaints. His classroom teacher told him that he would have to miss his free time in order to complete the work he had missed in the diagnostic room. Bob started forgetting to come, and his classroom teacher stopped reminding him. When the diagnostic teacher went to get Bob, the teacher said, "Oh, Bob, I'm sorry, but you have to go to diagnostics now. Maybe you can finish your work while we're outside."

Needless to say, Bob's attitude toward his work in the diagnostic room grew quite negative; he viewed it as punishment for not being as "smart" as the other children. The diagnostic teacher discussed the matter with the classroom teacher, and a compromise was worked out:

Bob was to bring his classwork to the diagnostic room. This way, the diagnostic teacher was able to help him find more efficient ways of completing his assignments while working on some of his remedial needs.

Group Work in the Diagnostic Room for Bob, Linda, and Peter

The first day that Bob, Linda, and Peter came to the diagnostic room to work, we began with a discussion addressing each of their remedial needs and strengths. They selected "cubbies" where their work would be kept and talked about the kinds of things they would like to do in the diagnostic room. We agreed on a weekly schedule:

	Monday	Tuesday	Wednesday	Thursday
9:00-9:15	Bob's reading time	Linda's reading time	Peter's reading time	Group time (may be used for same activity)
9:15-9:30	Letter-sound activities	Sight-word-recognition activities	Fine motor activity	Language-experience stories or other verbal-expression activities
9:30-9:45	Readings from Charlotte's Web (or some other book of their choice) or help with classroom work			

Monday
9:00-9:15

Bob

Familiarize Bob with words he will be reading in the "Monster Books," by Ann Cook and Ellen Blance (Glendale, Calif.: Bowmar, 1973).

1. Introduce the "Monster Books," giving Bob plenty of time to look them over and encouraging him to speculate about the monster's activities.

2. Have the words from his first book written on individual cards.

a. Begin with four word cards. After telling Bob what the words are, line them up on a desk and review them. When he is secure with these words, have him close his eyes while one of the cards is taken away. He is then to open his eyes and decide which word is missing. Variation: when he closes his eyes, change the order of the word and have him reconstruct the original order and reread the words. Then move on to the next four words.

b. Have Bob dictate a sentence for each of his new words. These sentences can be written in a special notebook. He is then to find the words from the cards and underline them.

c. Using cardboard letters, have Bob form his new words with these letters. Then have him close his eyes while you make a one-letter change in the word. He is to find your "error" and correct it.

3. Have Bob read from his book and discuss the activities of the monster. Encourage him to project his feelings and reactions just as if he were one of the main characters.

Peter

Make a tape for Peter of words that have specific short-vowel sounds. Write the same words on separate cards. Divide a large piece of paper into five sections with the following headings:

a apple e egg i igloo o octopus

u umbrella

Review the picture cues and letter sounds with Peter. He is to follow the instructions on the tape. Example: "Find the word tag. Place the word card for tag in the correct column." After he completes the tape, he goes back to the beginning to make any necessary corrections.

Linda

Have Linda dictate a story on tape. She may then listen to the tape while she illustrates her story. Large craft paper and felt markers will be easy for her to handle. Any of the following activities may also be selected for Linda to work with independently during this time:

1. Tracing stencils -- Ideal School Supply Co. (Oak Lawn, Ill. 60453) sells a set of templates of cars, cakes, horses, squirrels, etc.

2. Coloring designs -- Designs to Color, by Betty Schaffner (Los Angeles: Price/Stern/Sloan, 1967).

3. Dot-to-dot pictures can be mounted on tagboard and used for sewing pictures.

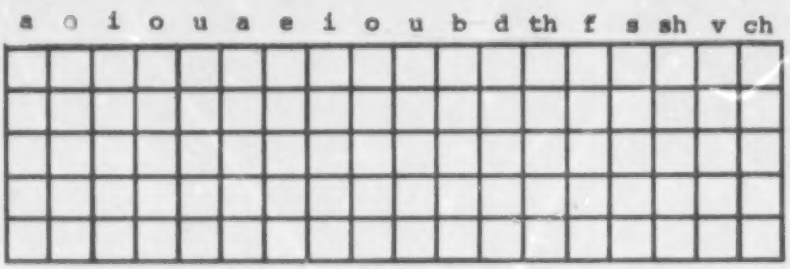
4. Primary typewriter -- Before teaching Linda to type, allow her time to experiment with the machine.

5. Clay -- Have some of the words that Linda is using in reading written on cards. She is to use clay to form the letters needed for her words.

9:15-9:30

Any of the following letter-sound activities could be selected for this time period:

1. Each child is given a sound chart that looks like this:



The children close their eyes while the teacher makes a letter sound. The letter is identified by any of the children, and then they have one minute to say as many words as they can think of that have that sound. No word may be repeated. The number of words is then recorded on each one's chart with the date. As the children progress, have them think of words that have the sound in a specific location. Example: "I want to see how many words you can say in one minute that have the b sound at the end."

2. Rhyming Riddles -- Have the children make up their own rhymes: "I'm thinking of a word that begins like she and rhymes with lip" (ship).

3. Letter-grid games -- Using masking tape and watercolors, make the following grid on the floor (measuring six by six feet):

a	e	i	o	u	y
b	q	f	t	j	v
s	c	r	g	w	k
d	ea	h	z	l	x
igh	m	pr	n	sh	p
ou	dge	tch	th	br	ch

Say a short single-syllable word. The child who identifies the short-vowel sound within the word jumps to the letters (in order) that form the word. Variations: identification of initial sounds, medial sounds, ending sounds, and long-vowel sounds.

4. "When I point to you, tell me a word that rhymes with something in this room."

5. Read some Edward Lear or Laura Richardson limericks and poems. As you are reading, leave out the last word of every other line and have the children fill in the missing words. They should be encouraged to use contextual and rhyming cues.

9:30-9:45

This time may be used for readings from a book such as Charlotte's Web or for receiving assistance with classwork. The purposes of the group readings are:

1. to promote good group listening skills
2. to make reading a pleasurable experience
3. to stimulate pictorial accounts of the story, encouraging those who are reluctant to draw
4. to promote active verbal exchange: discussion of various cause-effect relationships within the story, recollection of factual information, and discussion of the characters' feelings

Tuesday
9:00-9:15

Linda

Sight recognition of words that Linda will be reading in the "Super Books," by Jo Anne Nelson (Philadelphia: Lippincott, 1974): Leonard Visits Space, Leonard Visits the Ocean Floor, Leonard Discovers America, and Leonard Visits Dinosaur Land, and in the "Monster Books," by Ann Cook and Ellen Blance (Glendale, Calif.: Bowmar, 1973).

1. Use a tachistoscope, showing the words long enough for Linda to see them, yet not long enough for her to sound them out.

2. When Linda attempts to read a word for the first time, she should be allowed to sound it out. However, when she tries to read it in the future, she should be strongly discouraged from sounding it out.

3. In dictating stories from storybooks without words, Linda should "proofread" her story. Select certain basic sight words from her story and have her find them in her story and underline them.

4. In readings from Linda's book, encourage her to use contextual clues to figure out new words. When she does sound out words, emphasize letter groups rather than isolated letters, that is, have her sound out br as br, not as b-r.

Peter and Bob

Peter and Bob may work on any of the following activities:

1. Sea of Vowels (Ideal School Supply Co., Oak Lawn, Ill. 60453)

2. Vowel Rummy (Kenworthy Educational Service, Inc., Buffalo, N.Y. 14205)

3. Vowel Go Fish (Kenworthy)

4. Vowel Lotto and Consonant Lotto (Garrard Publishing Co., Champaign, Ill. 61820)

5. Using a Snoopy cartoon without the captions, dictate their own captions into a tape recorder

6. "How many different ways can you ask for a piece of chocolate cake?" with ideas dictated into a tape recorder. The use of a tape recorder

expands a child's awareness of the power of words as he records and plays back. Intonation, emphasis, choice of words, and timing are all most apparent when a child can hear himself.

7. Scrambled words -- Change the letter order of words that each of them is learning and have them reorder the letters to form words. This may be quite difficult for Bob, at first, so give him the words unscrambled and have him match the scrambled words with unscrambled words. Examples:

Scrambled	Unscrambled
1. tac	1. what
2. htat	2. sat
3. thaw	3. him
4. lliw	4. she
5. tas	5. cat
6. mih	6. the
7. het	7. that
8. hwne	8. here
9. rehe	9. when
10. hes	10. will

9:15-9:30

Activities that emphasize sight recognition of words and visual recall:

1. Sight-word concentration

2. Use of the letter grid -- Write a commonly used word (such as what) on the chalkboard. The first person who can read the word without sounding it out gets to see how quickly he or she can jump to the letters (in order) that form the words.

3. Word tracking (adapted from Donald E. P. Smith, Word Tracking, Michigan Language Program, Worthington, Ohio: Ann Arbor Publishers, Inc., 1967) -- Example:

   What was that?

   When Where What is we was she this that?

   The children are timed to see how fast they can find and underline the words in the original sentence. They must scan from left to right and may not go backwards.

9:30-9:45

Same as Monday

Wednesday
9:00-9:15

Peter

Peter's reading time:

1. Peter may choose a book from the library or from the diagnostic room. He should need very little preparation for his reading. When he gets to a word that he does not know, break it into meaningful letter groups and encourage him to use contextual clues.

2. Have Peter write his own newspaper column (by dictation), reporting the facts of his book and ending with a commentary on what he thought of each section of the book and whether or not he agreed with the actions of the main characters.

Bob and Linda

Bob and Linda should work independently and should be timed to see how long they can work without becoming distracted. Some possible assignments:

1. Solving maze puzzles or picture puzzles

2. Word lines -- The last letter of each word is the first letter of the next word. They are to underline each word in the line: in catopatapopasstop, the words are cat, top, pat, tap, pop, pass, stop.

3. Mapping -- Give Bob and Linda a map of the school, neighborhood, etc. Review the map with them to make sure they understand and have them map out the shortest routes to specified destinations.

9:15-9:30

1. Group mural -- The children decide which part of the readings from Charlotte's Web they would like to depict. Next, they must agree on who will be responsible for designated sections. They may want to use finger paints, watercolors, or felt markers.

2. Have each child illustrate a part of the readings, not as a group effort.

3. Using an overhead projector, project a picture from the book onto a large piece of paper and have the children trace the picture.

9:30-9:45

Same as other days

Thursday
9:00-9:30

Writing activities drawn from Wishes, Lies and Dreams, by Kenneth Koch (New York: Chelsea House Publishers, 1970), and other sources:

1. "Whoppers" (lies) -- Have the children take turns telling the most imaginative "lies" they can think of while you write them on a large piece of paper. Have the children "proofread."

2. "If any wish that you made would come true, what would you wish for?" Again, write the children's responses.

3. Dreams -- same procedure

4. When the children start to write their own stories, provide a stimulating beginning. Examples: "What do you think of when you think of the color red?" "When you are walking on a sandy beach, how does it feel to have the sand 'flowing' around your feet?" Since children like to talk and write about their own impressions and experiences, this provides a starting point for trying to interest a child in writing.

5. Fluency exercises (drawn from Donald and Judith Smith, Speaking: Fluency Program Script Book, Michigan Language Program, Worthington, Ohio: Ann Arbor Publishers, Inc., 1967). Example: "When I point to you, tell me something that is not in this room. Variations: (a) synonyms--"When I point to you, tell me another word for talk"; (b) antonyms; (c) various categories-- "When I point to you, tell me the name of a vegetable, car, etc."

6. "How many different ways can you tell me that you are thirsty?" " . . . tell me to close the door?" ".. . . tell me to be quiet?"

7. Pantomime -- The group sits in a circle. The center of the circle is a farmer's field. A child pretends that he is something in that field, and the rest guess. After each person has had a turn, the children sit with their legs crossed and their hands folded (to ensure that no body-language clues will be given). Now each one describes something in the field, using only words. The rest of the group guesses.

8. Nonsense words (from Teacher's Resource Book for Developing Children's Perceptual Skills in Reading, by Mary Horan and Eleanor O'Donovan, Westport, Conn.: Mediax, 1971, pp. 166-168) -- The children are read a sentence with a nonsense word in it. They are to replace the nonsense word with a real word. Example: "Susan penlubgat a hat." The word substituted must make sense.

9. Read the Beatrix Potter books to the children. Insert words that contextually are absurd. The children are not to "allow" you to get by with this "silliness."

10. Repetition of sentences that get progressively longer: "It is cold." "It is cold and wet." "It is cold and wet outside." "It is cold and wet outside today."

11. Read three words to the children and have them repeat them to you in alphabetical order.

12. "Three Changes" -- Have two of the children leave the room while the third child makes three changes in the room. When the other two return, they are to say what the changes are.

13. There will be many occasions when this time is best spent in helping the children with an assignment from class or teaching them a game that they can teach to their classmates.

9:30-9:45

Unless this time is needed to complete other assignments, continue with readings.

Evaluation

After Thanksgiving vacation, we assessed the achievement of the group. We concluded that these three children worked well together. Their needs were complementary, and they took great pride in being able to help one another.

Because Peter did not need as much assistance as the diagnostic teacher had foreseen, he spent his time helping Bob and Linda. This is a good example of a situation where the diagnostic teacher did not abide by the rule "All recommendations for testing should come from the classroom teacher."

Bob's sight-word vocabulary continued to grow, and he began to sound out words that he had not been able to read previously. During group reading time (9:30-9:45), Bob still needed frequent reminders to ignore sounds outside the room. In September, he could only listen for three or four minutes before being distracted; now he can attend for eight to ten minutes. He decided that

he wanted to be timed during group reading time and that a progress chart recording his time would be useful. Bob continues to have difficulty expressing his thoughts, but he does not give up so easily any more by saying, "Well, you know what I mean."

For some time Linda was frustrated by not being allowed to sound out every word she read. Now, however, she takes great pride in reading some words as whole words. While she no longer attempts to sound out single-syllable words such as cat, she is still inclined to sound out consonant blends like sh as s-h rather than as sh. Although her fine motor control is still very weak, she is more willing to draw pictures.

Peter will no longer come to the diagnostic room. Linda and Bob will continue to work together. They will each now have two individual reading times instead of one. Their progress will be reassessed in January.

Donald Diggs
Age 12-10

Donald has been accepted in seventh grade at one of the very good and quite demanding boys' schools in our area. From the time he left us, at the end of third grade, he has been in a coeducational independent school. That school thinks he is ready for a change, if he and his family feel it best for him to move on. When he was in second grade, his teacher said of him, "Don's determination, intense drive, and strong will to succeed have contributed to his gains this year. He is responsible, accepts limits, and complies with the standards set by the class."

About halfway through second grade, Don was no longer a group of one, physically on the fringe of the class. The beginnings of a strong intensity of purpose about his school day were developing.

This was not always so. Don needs to be looked at retrospectively to appreciate how a child with the strength of ten and the frustration of twenty can build his future even as he moves very heavily in the present.

In April 1969, Don, his first-grade teacher, and his parents met for a conference. The teacher wrote:

> I am very concerned about Don. It seems to all of us who have been working with him that the emotional factors in his learning problems must suggest psychiatric as well as other help. There appears to be some definite neurological malfunction. This should be looked at immediately so that he may begin school in the fall with all things possible in his favor.

Donald started school at nursery level, age four years, six months. His Binet range was "Superior." He was mature and well-adjusted in his test situation. The impression he made in group testing was that of a cooperative, affectionate child who needed affection and much opportunity to explore and create. His parents felt that, of their four children, Don was the most intelligent and should not be allowed to be bored. His verbal ability was far above that of his siblings, they felt. By the end of a good nursery year, he showed interest in many things and was altogether ready for kindergarten.

He entered kindergarten at five years, six months, easily and comfortably and, of course, with exuberance and enthusiasm. His ideas were good, but he hever stayed with any activity for very long. His reports read, "Very excitable," "Easily overstimulated," "Quick to lose all self-control." He knew about eight letter sounds, could sometimes write his name, and was well below class median in reading-readiness tasks. His math interest was slight. He rarely finished an assignment and started to "strike" at other children.

Entering first grade at six years, six months, Don remained adept in

oral expression and enjoyed "word" experiments. He was anxious to learn to read. A sensitive teacher reported at midyear:

> He must be reassured that he will learn to read. It may be a task that takes longer, but he will eventually read. Many things are difficult for Don, and he gets frustrated when he cannot master a concept, or he gives up completely and becomes preoccupied. He is easily distracted, and at times it is difficult for him to focus on a subject. He needs to be enticed with gadgets, colors, and manipulative materials into some academic situations, and even then his interest often dissipates and he becomes interested in something else for a short period of time.
>
> Since December, Donald has worked individually as well as in a small group in skills related to language arts. We provided this situation in order to focus his interest, to remove him from distractions, and to see what kinds of teaching would be most effective for him. We have incorporated some tracing and kinesthetic work in teaching him words which he has selected. He tends to trace mechanically without realizing the function of the process. When he realizes that he does not then know the word, he begins anew with greater purpose. However, he does not always retain what is taught this way, and we are still unsure how much reteaching is necessary. He enjoys filing his words and matching activities. It is difficult for Don to separate the mechanics of a learning task from its purpose; for example, his hand will continue to trace a word even when his attention has moved on to another step.

By the end of that year, Don could name eight letters as they were traced on his back. He learned by what he heard and was able to retain what he had heard. He became discouraged easily, not moving toward reading and avoiding the printed word. His parents were anxious and worried about "learning disability." Don's left-right control was amiss, and he had a poor concept of his body in space and of general body image. At year's end, he could not be evaluated on the Stanford Achievement Test, for he could not sit long enough to do it orally with the teacher marking his answers. His tutor despaired of his retention. "He would," she said, "learn something one day and not be able to repeat it the following day."

During the late summer of 1969, Don's neurological examination was done. The doctor reported:

> Positive findings on the examination: In addition to the hyperactivity, shortness of attention span, include marked motor awkwardness particularly with regard to fine repetitive movements of the fingers and the hands. There is also difficulty reproducing simple geometric designs, such as triangle, diamond, so forth. Mathematical concepts are also an area of difficulty. Reading is barely at first-grade level today. His Draw-a-Man tests show marked distortion of body parts, and this is, I think, a further reflection of his perceptual difficulties.

In his summary, the doctor said:

> I feel that Donald represents a child with definite evidence of minimal cerebral dysfunction syndrome. Although his over-all IQ is certainly within normal limits, he has marked depression in the area of performance. In addition, he has a significant amount of emotional overlay largely stemming from the feelings of inadequacy.

The year Don was to have been in second grade, a group of children who were having difficulty in learning were drawn together for an "alternatives" classroom. It was planned as a self-contained group with a diagnostic teacher who had many years of classroom-teaching experience.

Don and his teacher had established comfortable rapport during the previous spring, and he was involved in planning for this new group with her and with the children. The earliest assessment was informal because it was difficult to test Don for any length of time. The eight letters he knew were not at all legible. He reversed three out of five letters and six out of nine numbers. He tried to read, but no sound he said represented any letter. He had a good command of words, but his attention span was short, and he began distracting tactics immediately. When especially upset, he relied on the old faithful of all defenses: "If you do not do what I said, I will give you two or three days, and then leave school and never come back." When he was bade goodbye and told sadly that he would be missed--but that, if he must leave, we would understand--he came back and asked to be forgiven.

He responded to praise, and if his self-concept had not been threatened by his frustration at not being able to read, Don would not have needed to be so unyieldingly angry.

Don was "opting out" less and less. We made an early deal: he could take off to specified places when he felt he needed to. We trusted him to return, and he trusted us to understand. But he "took off" less and less, and his tantrums and outbursts diminished as the year progressed. He began to work with spatial concepts, but number reversals and transpositions still plagued him--a 61 for 16 and a 79 for 97 make for poor place value. He could by now, however, recognize shape and size from any angle, even when they were rotated, and this could help with reading. Most of the time he found a workable alternative. By the end of the year, his school performance was evaluated on the basis of his reading. Taking an achievement test, he scored the following grade-level equivalents: word reading, 2.0; paragraph meaning, 1.4; vocabulary, 5.2; word-study skills, 1.5; and mathematics, 2.1.

With little or no effort, Don began to write and produced a book.

His writing was a great joy. With little or no effort, Donald took to writing and produced a "book-length" story almost every day. He was helped somewhat with his spelling, but only if he felt he could not "figure it out." What was very interesting was that he no longer had any awareness of the time when he could not write a story--as if he had been doing this ever since nursery school. He was not at all inhibited and could write literally all day long. He set up a competition with himself to make each story longer than the previous one and also more involved in plot and setting. We continued to have him work with the typewriter because we felt it was very helpful, both to his spelling and to his small-muscle development.

At age eight years, six months, in September 1970, Don was a member

in quite good standing of a second-grade class. During the summer, he had gone to camp and worked hard at his skills. Early in the fall, his mother decided that the previous year had been especially good, but that if he was to succeed in a larger class he needed the help of a psychiatrist. At a conference in November, Don's teacher and his doctor decided that it would be useful to pull in the reins and get Don to conform to routine. He began to do his work and turn in his assignments. He still blew hard and angry but coped more easily. We did not always know how we were going to handle home problems. He did not need a "divorce," but his parents were in the throes. He was sleeping poorly, waking up at two and three in the morning, and of course he could not manage the school day at all.

He badly wanted to read and spend time both in class and in the diagnostic room, hard at work. He developed excellent reasoning power in math computation and concepts but could not do rotation unless his teacher was with him. But he always made an initial attempt. A note in the teacher's report concludes:

> We taped Don's reading, and we were more than surprised at the drive, word and structural attacks, and his insistence on on continuing long after he was so tired he really should have stopped. We played the recording for his mother. She burst into tears and cried for ten minutes. "I never heard him read this way before."

By the end of the year, Don's Stanford Achievement Test scores were: word meaning, 3.5; paragraph meaning, 3.4; spelling, 1.5; word-study skills, 2.8; computation, 2.6; and math concepts, 5.1. His teacher said that it was hard to remember that in September Don had hardly been able to read at all.

Don entered the third grade in September 1971 at age nine years, six months. He one large problem was spelling, and, as a result of his difficulty, he refused to commit word to paper, at first. But gradually he was

intrigued by keeping a journal and spelling lists, until, by midyear, even his definitions and stories were almost up to class median. He was responsive, pragmatic, and a good solution-offerer and problem-solver. He refused to be immobilized by spelling. Instead, his teacher reported,

> he is increasingly willing to try to sound things out for himself and then go on. He can print evenly and clearly, and is doing beautifully in our current work with cursive writing.
>
> In the diagnostic class, our approaches to Don's spelling problems this fall were varied. He read stories and then wrote questions and answers involving the immediate recall of vocabulary; he was assigned topics to write or type, encouraged to use the dictionary, and then tested on the specific words he looked up; he analyzed words in terms of their linguistic patterns, using word lists for reinforcement. However, none of these methods really helped him. And no one was more aware of it than Don himself, who has brought a new objectivity and insight to all his class behavior this year.
>
> A recent spelling error illustrates his difficulties: uinefrsite for university. Don may well say "unifersity" instead of "university"; in any case, he is unable to discriminate the sound v from f. He recalls that the word has an i and an n in it, and an e and r, but memory for placement in the word is imperfect. Because of his difficulty ordering the sounds within words he is unable to "sound out" and correct the letter sequence. In this instance, he selected most of the correct vowels; usually he does not.
>
> When Don recognized his very basic difficulties with letter-sound relationships, he was motivated to solve them, even though the process would be a long-term, slow, repetitive one of drill, listening, tracing, repeating.

In the spring, Don was accepted at the new school for the following fall. Both he and Beauvoir were full of excitement. His final report read:

> Donald is reading with good comprehension, doing required classroom assignments, and extending the amount and variety of his independent reading. Time is the great factor for him; he needs not to feel pressured and to be able to take as much time as he wants. Written work is still not easy, but he continues to gain confidence and self-reliance in starting and completing short pieces such as spelling assignments, factual descriptions, articles for the class "newspaper," and brief summaries. The content of what he writes is well chosen and concise.

For the remainder of the year, Don continued to type. The diagnostic teacher prepared work for him, and he worked well under his new self-directed schedule. Each day when he came into the diagnostic room, he went immediately to his typewriter. Next to it was a page with four words written on it and four IBM cards with the words written on them. The page also told him what to do with the words after he had studied them. For example, "Plan an interview with President Nixon, asking him five questions that begin with the four words you are to study today."

Don worked alone with little supervision. He studied his words carefully, wrote them on a piece of paper, and then used them in his typing, as the page suggested that he do. When he wanted to use a word while typing that he did not know how to spell, he asked. These words then formed the next day's spelling list.

The kinds of things he was asked to do with spelling words included looking them up in the dictionary and writing down their meaning, thinking of synonyms and antonyms, writing rhymes, dividing the words into syllables, and so on.

He worked steadily and conscientiously, and we were very pleased with his method of operation and his determination to do the job well.

His final Stanford Achievement scores were easily obtained, for he was comfortable and secure: word meaning, 4.2; paragraph meaning, 5.3; spelling, 3.5; computation, 4.0; concepts, 5.2; and application, 5.1.

At that point Donald was not yet on top of his academic problems, but the prognosis was looking up. The last three years have been good, and, if he wishes, Donald can now strike out on the demanding schedule of his new school.

IV. SUMMER COOKBOOKS

Frequently parents ask for a specific "cookbook" of ideas for work with their children when a holiday or a long summer is close at hand. These cookbooks, of which we give six examples in this section, are prepared by a number of people, with the classroom teacher and diagnostic teacher usually collaborating and other people adding ideas as they are able. A presummer conference is always held in which parents and teachers go over the materials so that they may be used as effectively as possible.

The games and books mentioned can be found or ordered at most local toy and book stores.

Summer Cookbook for Pamela
Second grade
Age 7-5

Pam has some difficulty seeing and then reproducing patterns. Direction can be a problem for her at times, causing her to reverse what she sees, both left to right and top to bottom. The following activities are generally in the categories of "fun" and "hobbies." Pam may find them more work than fun because they hit at her problem areas. Therefore, begin with the simpler tasks and build up to more difficult ones gradually. Talk about a sensible step-by-step procedure that will lead to a successful conclusion in terms of time spent. Keep it short at first. Pam will spend more time on those activities that intrigue her most.

1. Origami (Japanese paper-folding) -- Complete kits are available with paper and directions for making boats, birds, and animals. Be available for help with this one.

2. Book on how to make paper airplanes, by Jerry Marder and George Bipple, including some very simple ones with easy directions.

3. Play tiles -- Small red, white, and blue pieces fit into special pegboard. Special designs are included, which Pam can copy. (Ideal School Supply Co., Oak Lawn, Ill. 60453)

4. Easy craft kits using mosaics, yarn, and paint-by-number; sewing and embroidery kits.

5. Puzzles -- Try a seven-inch Springbok circular puzzle, which is small enough to be completed in one or two play periods.

6. Parquetry blocks and designs

Spelling and reading

Pam is quiet, but has much to say, as her stories indicate. Since she has an excellent voice, she might enjoy listening to herself, and this activity might encourage her to talk more freely and clearly. Here are some ideas to begin with.

1. Record favorite stories, books, or poems. Record original stories or poems. Encourage Pam to be a good editor and self-critical about good pronunciation. Clear enunciation is one of the keys to good spelling.

2. Record a drama. Take all parts by changing voices.

3. Keep a talking diary instead of, or combined with, a written one. Record impressions on the scene or immediately after getting home to get the freshest and most enthusiastic response.

4. Collect jokes and riddles. Combine with music, news, readings for a radio-program format.

5. Read poetry, which is particularly good for rhythm, pronunciation, and vocabulary.

6. Interview family and friends. "What do you think of . . . ?" "What is your favorite . . . ?" This is fun to play back when all the people concerned are together in a group and can hear what the next fellow thinks.

7. Record sound effects and extra voices for a puppet show.

8. Any and all elements of the above can be recorded and sent as a gift for a happy occasion or to someone who is ill.

Pam needs to develop greater skill in sounding out new words and spelling old ones. Step-by-step review with constant self-checking is the best road to success. For a good, systematic program that covers the letter-sound relationships Pam needs to know, buy "Building Reading Skills," a series of workbooks in student and teacher (with answers) editions, by Rowena Hargrave and Lila Armstrong (New York: McCormick-Mathers, 1965). Pam should complete several pages every day, starting with the Jet Plane Book. Then she should go on to the Rocket Book. Some lessons require dictation by another person, and some can be done alone. Each page should be checked by an adult before Pam begins work on the next page.

Summer Cookbook for Larry
Third grade
Age 8-0

Larry's reading has improved significantly this year. The purpose of the recommendations that follow is to continue the improvement of Larry's reading skills; to strengthen his written and verbal expressive skills; and to improve his spelling.

Reading, writing, and speaking

1. Larry should read for at least half an hour each day.

2. As he finishes each book, Larry should write a brief report that includes a summary of the book and his impressions of it. With your assistance, Larry should "proofread" his reports and make the necessary corrections (spelling, grammar, etc.). His reports may include drawings. We would like to see these reports in September.

3. Larry should keep a daily diary, which he should be encouraged to keep up to date.

4. Larry should learn to use sentences that get progressively longer. This can be an enjoyable game while traveling or driving.

First person: "I saw a rabbit."

Second person: "I saw a big rabbit."

Third person: "I saw a big rabbit running."

5. Sentence Cube Game (Selchow and Righter Co., Bay Shore, N.Y. 11706)

Spelling

1. Sight Word Concentration -- Write each of Larry's spelling words on two index cards. Place the cards face down on a table or the floor. Each person takes a turn trying to find matching pairs. If a matching pair is found, the person must read the word and then he may keep the pair. If the person can also spell the word, he gets a second turn. The object of the game is to finish with the most pairs.

2. Spill and Spell (Parker Brothers, Salem, Mass. 01970)

3. We will give you a worksheet that lists the letter sounds that Larry has difficulty with. He is to close his eyes while you make the letter sound. Then have him identify the letters that make that sound. Have him see how many words he can say in one minute that have that sound in the beginning, middle, and end of the word.

Reading list

Baer, Marion E. Sound: An Experiment Book. New York: Crowell, 1955.

Beeler, Nelson F. Experiments in Science. New York: Crowell, 1955.

Bendick, Jeanne. The First Book of Airplanes. New York: Franklin Watts, 1952.

Cameron, Polly. The Two-Ton Canary and Others. New York: Coward-McCann, 1965.

Corbett, Scott. What Makes a Car Go? Boston: Little, Brown, 1963.

Elting, Mary. Ships at Work. Garden City, N.Y.: Doubleday, 1946.

Frank, R., Jr. Work Boats. New York: Crowell, 1954.

Froman, Robert. Faster and Faster. New York: Viking, 1965.

Hoke, John. The First Book of Photography. New York: Franklin Watts, 1954.

Hughes, Langston. The First Book of Rhymes. New York: Franklin Watts, 1954.

McCarthy, Agnes. Room 10. Garden City, N.Y.: Doubleday, 1971.

Miles, Miska. Hoagie's Rifle Gun (1970), Annie and the Old One (1971), Mississippi Possum (1965). Boston: Atlantic Monthly Press.

Sobol, Donald. Encyclopedia Brown, Boy Detective. New York: Scholastic Book Service, 1963.

Summer Cookbook for John

Second grade
Age 8-0

During the summer, John must assume responsibility for planning a schedule for each day. His schedule should include some objective to be met by the end of the day. John should be strongly encouraged to follow his planned schedule, which should include responsibility for the complete upkeep of his room every day.

John should make collections of sea shells, beach glass, and rocks. He should be encouraged to go off on his own to explore his surroundings and to make his collections, which should be organized in whatever way he decides. He should label items in his collections with small name tags.

We would like to see the finished product of the following activities:

1. A notebook of John's daily schedule, with his objectives stated

2. A summer diary, in which he should write daily. This could accompany his schedule notebook.

3. John should read for half an hour each day. As he finishes each book, he should write a report that summarizes it. His reports can be gathered in a notebook and may include drawings.

Games that John may enjoy are:

1. Sentence Cube Game (Selchow and Righter Co., Bay Shore, N.Y. 11706).

2. Junior Scrabble (Selchow and Righter Co.)

3. Battleship (Milton Bradley, Springfield, Mass. 01101)

4. Spill and Spell (Parker Brothers, Salem, Mass. 01970)

Book list

Ardizzone, Edward. Little Tim and the Brave Sea Captain (1963), Tim's Friend Towser (1962), Tim to the Lighthouse (1968). New York: Henry Z. Walck.

Campbell, Elizabeth. Fins and Tails. Boston: Little, Brown, 1963.

Carter, Katherine. The True Book of Oceans (1958), The True Book of Pebbles and Shells (1954). Chicago: Children's Press, Inc.

Dudley, Ruth. Sea Shells. New York: Crowell, 1953.

Foster, Doris. Honker Visits the Island. New York: Lothrop, Lee and Shepard, 1962.

Gaudey, Alice E. Houses from the Sea. New York: Scribner's, 1959.

Howes, Judy. Shrimps. New York: Crowell, 1966.

Kepes, Juliet. Frogs Merry. New York: Pantheon, 1961.

McClintock, Mick. A Fly Went By. New York: Random House, 1958.

McCloskey, Robert. Burt Bow, Deep Water Man. New York: Viking, 1963.

Pene du Bois, William. Otto at the Sea. New York: Viking, 1963.

Podendorf, Illa. The True Book of Animals of Sea and Shore. Chicago: Children's Press, Inc., 1954.

Selsam, Millicent. Plenty of Fish. Evanston, Ill.: Harper and Row, 1960.

Sendak, Maurice. Where the Wild Things Are. Evanston, Ill.: Harper and Row, 1963.

Summer Cookbook for Jennifer
Kindergarten
Age 6-1

The following activities are designed to improve Jennifer's ability to discriminate among letter sounds in words. Whenever Jennifer is working, provide a room or corner that is quiet and uncluttered.

1. Riddle, Riddle, Rhyme Time (Dexter and Westbrook, Ltd., Baldwin, N.Y. 11510) -- "I'm thinking of a word that starts like dip and rhymes with hog." Answer: "dog." Have Jennifer make up her own set.

2. Have a special time each day for reading to Jennifer. While reading, emphasize a word for which she must think of a rhyming word.

3. "Detroit to Tokyo" -- You say a word. Then the next person must say a word that starts with the same sound that your word ended with:

   First person: "apple"

   Second person: "lamp"

   Third person: "pear"

4. Board and card games

   a. Sea of Vowels (Ideal School Supply Co., Oak Lawn, Ill. 60453)

   b. Phonic Rummy (Kenworthy Educational Service, Inc., Buffalo, N.Y. 14205)

   c. Phonic Go Fish (Remedial Education Press, 2138 Bancroft Pl., N.W., Washington, D.C. 20008)

5. While at dinner, everybody closes his eyes except one person, who chews on a piece of food. The others try to guess what it is.

6. One person closes his eyes while another person makes several noises (slamming a door, tapping on a table, stomping a foot). The other person then opens his eyes and tries to repeat the noises in the same order.

7. Have Jennifer listen to a story while a record is being played, at first at low volume. Then have her answer questions about the story.

The following activities should improve Jennifer's ability to relate parts of objects to the whole object.

1. Jigsaw puzzles
2. Finding hidden pictures, regular features in Highlights for Children, Humpty Dumpty, and Sesame Street (magazines)
3. Worksheets provided with this cookbook
4. Name the alphabet by finding each letter in sequence on signs while riding in the car.
5. Count from one to ? by finding numbers in sequence on car license plates.

The following activities are meant to improve Jennifer's ability to recall in a sequence what she has heard.

1. "Going to the Market"

   First person: "I'm going to the market to buy an apple."

   Second person: "I'm going to the market and I'm going to buy an apple and a banana."

   Third person: "I'm going to the market and I'm going to buy an apple and a banana and a cookie."

   This game is played until the entire alphabet has been completed.

2. Songs -- "I Knew an Old Lady," "The House that Jack Built"
3. When giving Jennifer directions, give her only a couple at a time and have her repeat them. Gradually increase the number of directions you give.
4. Have Jennifer repeat sentences that get progressively longer: "I saw a rabbit." "I saw a big rabbit." "I saw a big rabbit running."

The following activities are designed to strengthen Jennifer's fine motor skills and should include casual reinforcement of left to right.

1. Clay work -- Have Jennifer make letters, numbers, and shapes out of clay. Plasticine is good.
2. Stencils for Tracing (Ideal School Supply Co., Oak Lawn, Ill. 60453)

3. Tracing dot-to-dot and maze pictures

4. Making a scrapbook by cutting out pictures and pasting them into a book. Allow Jennifer to organize the book as she wishes.

5. Coloring designs

6. Finger-painting, watercolor-by-number

7. Worksheets for fine motor work accompany this cookbook.

8. Do not allow Jennifer to hold her pencil with the palm of her hand!

9. Other activities

   a. Sort poker chips, buttons, clips, pebbles, nails according to color, size and shape

   b. Pick-up sticks

   c. Small rubber-ball games, fly-back paddle and ball

   d. Yoyo

   e. Etch-a-Sketch (Ohio Art, Bryan, Ohio 43506)

   f. Spirograph (Kenner Products Co., Cincinnati, Ohio 45246)

   g. Sewing cards

Summer Cookbook for Michael
First grade
Age 6-5

Michael has just recently begun to show modest improvement in his ability to discriminate among letter sounds in words. He also is just now beginning to express an interest in learning to read. Michael still has difficulty focusing on a specific task when there are distractions in the room. Therefore, whenever he is working, provide a room or corner that is quiet and uncluttered.

The following activities are meant to continue Michael's improvement in discriminating among letter sounds in words.

1. Riddle, Riddle, Rhyme Time (Dexter and Westbrook, Ltd., Baldwin, N.Y. 11510) -- "I'm thinking of a word that starts like dip and rhymes with hog." Answer: "dog." This game is available in two sets, A and B; set A is more consistent with Michael's ability.

2. Have a specific time each day when you can read to Michael. While reading to him, occasionally emphasize words for which he must thinking of a rhyming word.

3. "Detroit to Tokyo" -- Say a word. The next person must then say a word that begins with the same sound that your word ended with.

   First person: "apple"

   Second person: "lamp"

   Third person: "pear"

4. Board and card games

   a. Phonic Rummy (Kenworthy Educational Service, Inc., Buffalo, N.Y. 14205)

   b. Phonic Go Fish (Remedial Education Press, 2138 Bancroft Pl., N.W., Washington, D.C. 20008)

   c. Junior Scrabble (Selchow and Righter Co., Bay Shore, N.Y. 11706)

   d. Quizmo (Milton Bradley, Springfield, Mass. 01101)

5. While at dinner, everybody closes his eyes except one person, who chews on a piece of food. The others try to guess what it is.

6. One person closes his eyes while another person makes several noises (slamming the door, tapping on a table, stomping a foot). The other person then opens his eyes and tries to repeat the noises in the same order.

7. Have Michael close his eyes. Make the sound of a letter and have Michael identify the letter that makes that sound. Then give him one minute to see how many words he can think of that begin with that sound, then one minute to see how many he can say that have that sound in the middle of the word, and, finally, one minute to see how many words he can say that end with that sound. A record sheet is provided with this cookbook.

The following activities are designed to improve Michael's contextual-reading and word-attack skills, using Michael's own words or familiar words in each activity.

1. Sight Word Concentration -- Write each of Michael's spelling words on two separate index cards. Place the cards face down on a table or the floor. Each person takes a turn trying to find matching pairs. If a matching pair is found, the person must read the word and then he may keep the pair. If the person can also spell the word, he gets a second turn. The object of the game is to finish with the most pairs.

2. Make word cards for books that Michael may be interested in. Line up three or four word cards and review the words with him. Have him close his eyes while you take one of the cards away. Have him open his eyes and tell which word card is missing and where it was. Variation: after reviewing the words with Michael, have him close his eyes while you mix up the order of the words, and then have him put the cards in their original order.

3. Have a special 15 or 20 minutes each day when you can read with Michael. He might want to borrow some books from the diagnostic room, and he should make frequent visits to the library to borrow books he likes.

4. Using picture books without words, have Michael dictate stories to you about the pictures and then have him read his story to you. Some possible books are:

   Alexander, Martha. Out! Out! Out! New York: Dial Press, 1968.

   Carle, Eric. Do You Want To Be My Friend? New York: Crowell, 1971.

   Goodall, John S. The Adventures of Paddy Pork (1968), The Ballooning Adventures of Paddy Pork (1969). New York: Harcourt, Brace and World.

   Krohn, Fernando. A Flying Saucer Full of Spaghetti. New York: E. P. Dutton, 1970.

5. Suggest that Michael keep a summer diary, which he could then read to you.

6. These activities can follow Michael's reading time:

   a. Choose a few words from the story, and have Michael write his words in columns at the top of a sheet of paper. Use an egg timer and have him write as many words that rhyme with the word at the top as he can in a specified amount of time.

   b. Choose a couple of words and have Michael either write or dictate a sentence for both words.

Summer Cookbook for Ben
First grade
Age 6-9

The following activities are designed to continue Ben's progress in learning to discriminate among letter sounds in words.

1. Riddle, Riddle, Rhyme Time (Dexter and Westbrook, Ltd., Baldwin, N.Y. 11510) -- "I'm thinking of a word that starts like dip and rhymes with hog." Answer: "dog."

2. Have a special time each day when you can read with Ben. While reading to him, emphasize various words for which he must think of a rhyming word.

3. "Detroit to Tokyo" -- You say a word. The next person must then say a word that begins with the same sound that your word ended with.

   First person: "apple"

   Second person: "lamp"

   Third person: "pear"

4. Board and card games

   a. Sea of Vowels (Ideal School Supply Co., Oak Lawn, Ill. 60453)

   b. Silly Sounds (Ideal)

   c. Quizmo (Milton Bradley, Springfield, Mass. 01101)

   d. Phonic Rummy (Kenworthy Educational Service, Inc., Buffalo, N.Y. 14205)

   e. Phonic Go Fish (Remedial Education Press, 2138 Bancroft Pl., N.W., Washington, D.C. 20008)

5. While at dinner, everybody closes his eyes except one person, who chews on a piece of food. The others try to guess what it is.

6. One person closes his eyes while another person makes several noises (slamming the door, tapping on a table, stomping a foot). The other person then opens his eyes and tries to repeat the noises in the same order.

The following activities are meant to help Ben improve his ability to recall in a sequence what he has heard.

1. "Going to Mrs. Murphy's"

   First person: "I'm going to Mrs. Murphy's and I'm going to buy an alligator."

   Second person: "I'm going to Mrs. Murphy's and I'm going to buy an alligator and a banana."

   Third person: "I'm going to Mrs. Murphy's . . ."

   The game proceeds with each person repeating the items from before (in order) and adding an item of his own until the entire alphabet has been used.

2. Have Ben keep a diary, encouraging him to recall his day's activities in the order in which they occurred.

3. When giving Ben directions, give only a couple at a time and have him repeat them to you.

4. Have Ben close his eyes while you make a short series of noises (slamming the door, tapping the table, stomping on the floor). Have Ben open his eyes and repeat the sequence.

5. Have Ben learn songs that get progressively longer: "I Knew an Old Lady," "In the Cabin by the Woods," "The Green Grass Grows All Around."

The following activities are intended to improve Ben's fine motor control.

1. Clay work -- Have Ben make letters, numbers, and objects with plasticine.

2. Tracing dot-to-dot pictures

3. Mazes for Fun, by Vladimir Koziakin (New York: Grosset and Dunlap, 1973)

4. Designs to Color, by Betty Schaffner (Los Angeles: Price/Stern/Sloan, 1967)

5. Stencils for Tracing (Ideal School Supply Co., Oak Lawn, Ill. 60453)

6. Watercolors for finger-painting letters, numbers, pictures, words, etc.

7. Sorting beads, coins, and other objects; egg cartons are useful for this. Have Ben work out his own method of organization, then encourage him to explain his method.

The following activities are intended to encourage continued improvement in Ben's word-attack and contextual-reading skills.

1. Set aside a special time each week when you and Ben can visit your neighborhood library to select some reading books. Encourage him to select books that are not too difficult.

2. Set aside a special time each day when you and Ben can read together for 20 or 30 minutes.

3. Storybooks without words:

   Alexander, Martha. Out! Out! Out! New York: Dial Press, 1968.

   Carle, Eric. Do You Want To Be My Friend? New York: Crowell, 1971.

   Goodall, John S. The Adventures of Paddy Park (1968), The Ballooning Adventures of Paddy Pork (1969). New York: Harcourt, Brace and World.

   Krohn, Fernando. A Flying Saucer Full of Spaghetti. New York: E. P. Dutton, 1970.

   Have Ben dictate stories to you that will go with these books, then have him "proofread" them.

4. Word concentration -- Make concentration cards for the words that Ben will be encountering in his reading.

5. Make word cards for Ben. Line up three or four cards in front of him and then review the words with him. Have him close his eyes while you take a card away. Then have him open his eyes and tell you what word is missing. Variation: after you have reviewed the words with Ben and he has closed his eyes, mix up the cards. Then ask him to reconstruct the original sequence.

V. CLASSROOM TECHNIQUES FOR PROVIDING ALTERNATIVES

Especially for those schools where a diagnostic teacher is not available, classroom teachers are best able to sharpen children's receptive and expressive processes on the basis of observable classroom behaviors. Once the class has been under way for several weeks and the teacher has begun to record the children's behaviors, she can more clearly work with them in group and individual ways. These behaviors may shift subtly or measurably, depending on whether a child is in a group or whether he is alone with an adult. The "class clown" may not remain a figure in need of attention when the teacher and he are working very closely alone together.

In this section, we have tried to classify problems in large categories. There will, of course, be some overlap.

1. Expressive problems: difficulty in expressing ideas orally or physically

2. Association problems: difficulty in relating easily what is seen and heard to what has been previously learned

3. Comprehension problems: difficulty in understanding the significance of what is seen and heard

4. "Listening" problems (as distinguished from comprehension problems): difficulty in learning from hearing language structure repeatedly

5. Problems of visual and auditory learners: difficulty in reproducing what is heard (visual learner) or seen (auditory learner)

6. Sequential memory problems: difficulty in remembering the order of what is seen or heard

We have provided a schema for working with children both in groups and individually. Techniques may be either specific or generalized; something

that is a good "individual" technique may also work for a small group of two to three children. What is essential is that the teacher do her own "record-keeping" so that she will know, in working with a child, that she has used a variety of ways, a variety of individual and group alternatives, based on the child's observable behavior.

1. EXPRESSIVE PROBLEMS

(Child does not easily express his ideas verbally or with gestures)

Observable classroom behavior	Classroom techniques	
	Group	Individual
	Expressive Oral Behavior	
Shy, seldom speaks up	Allow time for information-processing	Practice speaking in sentences
	Be fairly sure child knows answer required	Practice using synonyms, definitions
		Provide verbal experiences
Responds, but with one-word answers	Ask for more detailed information; prod verbally with initial clues	Help child define words by description and function
May talk, but does not express many ideas	Present visual clues as a model	Ask child to describe detail of pictures
	Encourage oral reports, but permit notes	Help child sequence ideas in cards and pictures
	Narrow discussion to specifics; ask germane questions	Encourage typing of stories told by child for critical self-appraisal
	Expressive Physical Behavior	
Poor motor coordination	"Simon Says" with auditory cues	Trace as much as possible

Observable classroom behavior	Classroom techniques	
	Group	Individual
Poor at "Simon Says" when words are omitted	Check for directional difficulty	Encourage child to draw
Has trouble imitating other children in games	Let him try "acting" before a mirror	Charades
Poor at "Charades" types of games		Teach child to button, zip, tie
Seldom communicates with gestures	Teach songs and stories with group action	Play nonverbal, small-group games
Handwriting and drawing very poor or developmentally inappropriate	Check other visual-motor abilities	In physical education, imitate tutor's actions and movements
	Begin cursive writing	Dot and outline letters
	Trace with reducing cues	Draw dot-to-dot numbers
	Use lined paper only: half-space, two-space, and three-space	Use letter templates
		Give auditory directional cues

2. ASSOCIATION PROBLEMS

(Does not relate what is seen and heard to what has been learned previously)

Observable classroom behavior	Classroom techniques	
	Group	Individual
	Visual	
Cannot handle initial writing/copying tasks	Permit child to trace correct responses first	Train the ability to classify as relates to the task required on worksheet
Concept formation poor	Provide an auditory clue	Sort objects, pictures by use, shape, size, color

Observable classroom behavior	Classroom techniques	
	Group	Individual
Does not comprehend what he reads	Have child read aloud and talk about story; take turns in circle groups	Put pictures in correct sequence and describe; put sentences in correct sequence
Cannot tell a story from pictures; all he can do is label objects in the pictures	Use simple pictures; make titles for them; tell simple stories about them	Incongruities in pictures; explain why they do not belong
	Auditory	
Poor at similarities	Ask one-concept questions eliciting several short answers	Train the ability to find common characteristics
Poor concept formation in verbal responses	Accept concrete answers, supplying more abstract information for him	Practice finding differences or similarities
Has problems with abstract reasoning	Provide visual cue where possible	Categorize or classify objects
Thinking quite concrete	Give ample time for response	Identify incongruities in stories
Will raise his hand but give a foolish answer and become embarrassed	Give child a written question to think about before answering	Help child stopwatch time himself
Is very slow to respond; needs time to mull over a question	Allow time before response	Help child anticipate with verbal cues
Does not comprehend directions	Have directions repeated step by step	Give model to see; have child draw model of spatial directions, map route
Has never enjoyed being read to	Use record-book combination, or let him follow visually while you read	Use two identical texts; have child follow in his

3. COMPREHENSION PROBLEMS

(Does not understand the significance of what is seen and heard)

Observable classroom behavior	Classroom techniques	
	Group	Individual
	Visual	
Does not enjoy pictures or books	Encourage child to answer orally whenever possible	Train ability to label and describe, using simple pictures or objects
Does not understand what he reads	Use method of reading with sound cues	Use simple visual aids for practice
Cannot describe what is happening in a picture; may only be able to label objects	Check comprehension carefully, giving auditory clues	Identify colors, letters, numbers, etc.
Cannot categorize pictures	Permit child to use records, tape recorder, or other method of listening material to be learned	
	Auditory	
Does not understand what he hears	Use short, one-concept phrases	Train "listening" skills
Vocabulary inadequate	Ask short questions	Use and teach synonyms and expanded expression
Does not carry out directions easily; loses sequence	Have child create experience charts telling stories sequentially	Give increasingly difficulty oral instructions and problems
Cannot identify sounds correctly	Give visual clue wherever possible--gestures, written material, etc. Use visual aids whenever possible	Write from dictation "Simon Says" types of games Language-development activities--use of plays, puppets, tapes

4. "LISTENING" PROBLEMS

(Does not learn easily from hearing language structure repeatedly)

Observable classroom behavior	Classroom techniques	
	Group	Individual
Mispronounces words commonly used and has no articulatory defect	Encourage imitation of teacher's phrases	Choral reading or reading
Does not use correct plural endings for such words as mouse, man, etc.	Write sentences having correct ending with children	Direct repetition of proper syntax with poems, short riddles, and rhymes
Does not use correct verb endings for past and progressive tenses	Provide visual cues whenever possible in stick figures or photographs	Sentence drills ("I walk, he _____, they _____"); use tape recorder; create word games
May have related problems in concepts of time and space or in sound-blending	Work on sight vocabulary Check visual closure abilities (see ITPA)	Use incomplete sentences and change techniques (see Woodcock Reading Mastery Tests)

5. VISUAL AND AUDITORY PROBLEMS

Observable classroom behavior	Classroom techniques	
	Group	Individual
	Visual Learner	
	(Cannot reproduce what he hears)	
May have a speech problem	Accept speech behavior; correct only when it interferes with ability to cope	Test for auditory discrimination; teach auditory discrimination where it is faulty
May sequence sounds or syllables oddly	Sight words should be basis for early reading	Teach sound-blending
May use "small words" incorrectly	Flash words on cards or other tachistoscopic device	Introduce phonics slowly and in short time spans

Observable classroom behavior	Classroom techniques	
	Group	Individual
Seems not to listen or understand	Context clues	Picture clues
May seem shy, rarely talks in class	Involve in group verbal activities	Persuade child to talk about self and interests
Responds in one-word sentences	Provide experiences	Teach expanded vocabulary
Can follow instructions better after being shown than being told	Use models	Provide model; draw maps for location directions
Cannot learn rote-memory tasks such as alphabet, number combinations, telephone number, address	Cloze technique: h - m, 652-4_19; "guessing games" of missing objects	Meaningful repetition of phrases, stories, riddles, etc.
Can "do" many more things than teacher would expect--fix electrical cords, put puzzles together, figure on abacus, etc.	Provide verbal experiences; help write verbal directions	Make games for other children and write verbal directions
Auditory Learner		
(Cannot reproduce what he sees)		
If child is older than eight: reversals of b, d, p, q, u, n when writing	Phonetic method of reading	Exercises to train visual-motor abilities; copying, tracing stencils
Inversion of numbers when writing (17-71), as well as reversals	Encourage oral response	Organizing and ordering tasks for visual-motor sequencing
Mixed laterality; motor awkwardness, frequently tripping over own feet, bumping into things	Work in small group; keep noise down; keep visual work uncluttered; few lines on work page and much white space	Train visual discrimination; train laterality with left/right games; use names for directions
Poor motor coordination	Color cues to reduce confusion; book marker to block out all but one line to reduce distractibility	Train body image

Observable classroom behavior	Classroom techniques	
	Group	Individual
Short attention span, short concentration on one task		Encourage short focal periods of attention; change activity often
Can give correct answers when teacher reads a test to him, but will not sit down and put them on paper	Tape record lessons whenever possible; test in short sessions; lessen requirements to lessen anxiety	Give standardized tests individually; note results with child, not anxiety
Poor handwriting; all writing and recording tasks tedious	Oral responses should be permitted; teach cursive writing daily	Help child reduce anxiety; writing is complex and slow to master
Poor performance on group tests of intelligence or achievement when writing is required	Give tests orally with teacher writing answers; permit typing	Use tape recorder to record homework answers and teach touch typing on primer keys at first (nonelectric preferred)
Poor perception of time and space; gets lost easily; can't tell time	Structure tasks carefully, one at a time; give notice before time for change	Anticipate change of schedule; plan day's work in advance; evaluate amount of work accomplished
May have a vision problem	Always request a medical check	

6. SEQUENTIAL MEMORY PROBLEMS

Observable classroom behavior	Classroom techniques	
	Group	Individual
Visual Memory		
(Cannot remember the order of things he sees)		
May misspell even own name after adequate practice	Permit child to use an auditory cue	Sequential pictures

Observable classroom behavior	Classroom techniques	
	Group	Individual
Can't write alphabet, numbers, addition and subtraction facts, or multiplication tables	Permit him to trace when possible	Copy sequences of beads, blocks, first with model and then without
May recognize a word one day and not the next	Use audio-visual aids whenever possible	Reproduce patterns
	Flash cards to be traced	Solve mazes
		Join dots to make patterns
		Teach typing

Auditory Memory

(Cannot remember the order of sounds he hears)

Can't remember what he hears	Permit child to use visual cues	Memory-training exercises
Doesn't know alphabet by heart	Have him write as he memorizes	Teach words in series
Can't count	Use short, one-concept sentences	Have child learn simple finger-plays
May not be able to memorize words to songs or poems	Work with meaningful units	Repeat sentences verbatim; use tape recorder
May not know his address, telephone number	Use visual models	Print with color cues; use cloze techniques (see Woodcock Reading Mastery Tests)
Can't remember instructions	Make instructions one-two step at first, increasing to three-four with mastery	

I. Auditory training

A. Suggested activities for general classroom auditory training

1. Children repeat a tapping pattern or tell the number of taps.

2. Children clap hands when they hear a word that rhymes with the first word, begins with a particular sound, or ends with a particular sound.

3. Children raise hands when they hear a word in a series that is different.

4. Children hold up the letter card for the first sound, last sound middle sound of a word called.

5. Children repeat a sentence (telephone message) or act out a story sentence by sentence after the teacher.

6. Children follow directions to perform commissions of increasing difficulty and number.

7. Children listen to a series of digits and write them on blackboard after the entire series has been presented, or they arrange pictures in a given sequence or draw designs in a given sequence.

8. Children guess riddles.

9. Children play Twenty Questions.

10. Children answer questions of fact and inference based on a story read to them.

11. Children make up an ending for a story read to them.

12. Children retell story in their own words.

13. Children find nonsense element in story.

14. Children play "Simon Says."

15. Children hold up "yes" or "no" cards following presentation of sentences or questions. ("A glove goes on a foot." "Is an eagle larger than a sparrow?")

16. Children complete analogies.

17. "It" guesses where in a room a sound came from or who spoke, or what made the sound (cough, sneeze, tearing paper).

18. Children repeat a sentence spoken during a noisy interlude (tapping, musical background, typing)

19. Children play recall game, "What Goes in My Shopping Bag," with each child repeating series given and adding one item.

B. Suggested activities for auditory reception training

1. Have one child leave the room, then select a multisyllable word and give each remaining child a syllable. When the first child returns to the room, the others should then say their syllables in the correct order. The first child has to guess the word.

2. Bring in food that makes loud sounds. Crunch down on it and have the child guess what it is.

3. Auditory discrimination tubes

4. Give a list of things in the same category. The child tells you how they are alike, or what does not fit and why.

5. Tell a short story with one absurd sentence. The child has to identify the absurd sentence and tell you why it is absurd.

6. Riddles

7. Identifying familiar sounds on tape

8. Following and repeating verbal directions -- "Simon Says"

9. "What Am I Thinking Of?"

10. Answering specific questions about oral stories

Materials: auditory discrimination tapes and auditory imagery tapes (Developmental Learning Materials, 7440 Natchez Ave., Niles, Ill. 60648)

C. Suggested activities for auditory association training

1. Begin a story and have the child complete it.

2. Riddles

3. Verbal analogies

4. Categorization of auditory stimuli

5. Opposites

6. Cause/effect relationships: situations, one's own behavior, etc.

D. Suggested activities for auditory memory and sequencing training

1. Read a story, and have children list events of the story in the order in which they occurred.

2. Read short poems, have children repeat them.

3. Repetition of a sentence that gets progressively longer: "I saw a rabbit." "I saw a big white rabbit." And so on.

4. Teacher gives three or four words orally. Child repeats in alphabetical order.

5. Teacher gives a series of directions, which child must perform and repeat.

6. Number sequences -- First child gives number; second child repeats that numbers and adds his own.

7. Clapping and stomping sequences

8. Repetition of sounds -- Teacher closes book, walks across room, and slams door while child hides eyes. Child then repeats sounds.

9. "Going to Mrs. Murphy's" -- alphabet. First child says a word beginning with an a. Next child repeats that word and adds a b word, and so on.

10. "Who Took the Cookie from the Cookie Jar?"

11. Rhythms

12. Gossip

13. Songs: "I Knew an Old Lady," "Twelve Days of Christmas," "There's a Hole in the Bucket," "In a Cabin in the Woods"

14. Tape recorder, which children use to tape favorite poems for memorizing

    Materials: auditory memory tapes (Developmental Learning Materials, 7440 Natchez Ave., Niles, Ill. 60648)

E. Suggested activities for auditory closure training

Auditory closure is the child's ability to fill or supply missing sounds in words. This includes his ability to fill in gaps in conversation, understand when telephone connections are bad, and his

ability to understand when the speaker has an unfamiliar accent. The teacher must ask, "Can the child fill in missing sounds in words?" To work on this, the teacher uses visual clues, omits as much talking as possible in the beginning stages, and uses some of the following training suggestions.

1. Using short sentences, leave out key words. Simple stories in which picture clues may be used may be helpful.
2. Leave out the key words in familiar nursery rhymes.
3. Check for comprehension of short paragraphs or at the end of stories where the meaning is rather hidden.
4. Read a short paragraph, leaving out the main idea phrase.
5. If a child is easily distracted by sounds around him, use tapes and records at listening centers.
6. Use a tape recorder and have the children identify voices heard against a background of sounds or music.
7. Listen to short-wave transmissions or garbled radio programs or astronauts' voices from out in space and tell what is being said.

F. Suggested activities for auditory closure and part-whole training

1. Pick a multisyllable word and give each child in the group one syllable. The children then sing syllables in order and must put them together and give the word.
2. "Riddle, Riddle, Rhyme Time" (Dexter and Westbrook, Ltd., Baldwin, N.Y. 11510)
3. Rhyming words -- Read the first line and all but the rhyming word of the second line of a poem. The child supplies the rhyming word.
4. Give the child a word and have him find objects in the room that rhyme with it.
5. Say a sentence emphasizing a cue word. The child names a color that rhymes with that word. ("I have a friend named Sue.")
6. Tell a story with every seventh word left out. The child finds a word from a list on the board and fills it in.

7. From left to right, expose cards phonetically regular words or multisyllable words.

   a. Word on card is split. Expose spli. Child must read that much aloud and guess what the whole word is.

   b. Word on card is zipper. Expose zip. Child reads aloud and guesses second syllable.

II. Visual training

A. Suggested activities for visual memory and sequencing training (use auditory cues and trace whenever possible)

1. Three or more children arrange themselves in a certain order. Another child looks at them and then covers his eyes while the other children scramble. He then has to rearrange them in their original order.

2. Arrange objects, shapes, letters, numbers, or word cards in a row for the child to look at. Then remove the sequence and have the child reproduce it, or remove one of the objects from the sequence and have him identify the missing object, or scramble the sequence and have him reorder the objects.

3. Arrange pictures in a row. Then have the child arrange the pictures in a logical order that he can explain. The same can be done with arranging words into sentences and sentences into stories.

4. DLM memory cards -- pictures, designs, words (Developmental Learning Materials, 7440 Natchez Ave., Niles, Ill. 60648)

5. Pegboard types of designs

6. Give each child in a small group a letter card. The teacher holds up a word card. Children with letter cards then arrange themselves in the correct order so as to form the word.

7. Typing

8. Sequence situations and various tasks, or type each instruction for a task on a separate piece of paper and have the child arrange them in order.

9. Sequence directions, writing directions from home to school out of sequence and having the child order them.

10. "Three Changes" -- Two children face each other, then turn away and change three things about themselves. Each must identify and describe the changes on the other.

11. Training memory for words

    a. Trace letters with finger and say each letter name or sound as you trace.

    b. Read whole word.

    Materials

    1. Slingerland pictures

    2. Any pictures from magazines that can be sequenced to make a story

    3. Milton Bradley sequence cards (Milton Bradley, Springfield, Mass. 01101)

    4. Letters that match pictures to make words (homemade or commercial)

B. Suggested activities for visual closure and part-whole training (ability to fill in what is missing from letters where stimulus is seen)

    1. Embedded pictures -- regular features in Highlights and Humpty Dumpty magazines

    2. Puzzles

    3. Parquetry designs -- Have child copy designs with crayons.

    4. Pegboard types of designs

    5. Geoboards -- Have child recreate design on graph paper.

    6. Cut off obvious part of a picture and have child identify the missing part.

    7. Frostig ditto masters 50-59

    8. Scrambled words, using white plastic or cardboard letters

    9. Buy "broken letter" puzzles or make large letters and cut into puzzle pieces. These should be put together as part-whole relationship puzzles.

    10. Broken-closure letters (Developmental Learning Materials, 7440 Natchez Ave., Niles, Ill. 60648)

    11. Cover all but a small part of a picture of an object, and have the child identify the object.

    12. Syllables -- Write two-syllable words on cards and cut in half. Play "Concentration," with each word a pair.

III. Verbal training

A. Suggested activities for general classroom verbal training

1. Child describes someone in the room or in his class, and the others guess who it is.

2. Taste and smell -- Child takes a taste of something to eat and communicates what it is by describing its taste and smell. (Discuss inherent danger in tasting or smelling everything and anything without supervision.)

3. The first child says a word. The next child repeats the word and adds a rhyming word, and so forth.

4. Opposites -- Teacher gives a word. Child must say its opposite.

5. Generate several words from a stimulus word. For example, the teacher asks, "What does summer make you think of?" The child must answer with specific words.

6. Use Slingerland pictures to stimulate verbal expression. Ask what may have happened just before the picture, notice the people in it, feel what is going happen next, etc.

7. Twenty Questions

8. "What Am I Thinking Of?"

9. Password

10. Stimulus-response word pairs

11. Picture books without words -- Child "reads" book and records his story.

12. Categories -- done to a slap, clap, snap (fingers), snap rhythm

13. Speed writing -- Student writes names of all (trees, foods, holidays, etc.) he can think of in two or three minutes.

IV. Motor training

A. Suggested activities for body-image training

1. Feeling self with self -- then, relaxation exercises -- "Think about how your toes feel connected to your feet. . . . Think about how your feet feel connected to your ankles. . . . Think about how it feels to have your toes, feet, and ankles all supporting your legs . . ." Sequentially discuss the child's entire body, relating each of the parts to the total body.

2. Relaxation exercises -- Begin with the toes and have the child flex and relax all of his body parts sequentially. Then have him flex every muscle in his body at once and then relax all of them. "Melt to the Floor" -- feeling heartbeat, etc.

3. Song -- "Dry Bones"

4. Put one child under a sheet. He is to make a part of his body prominent, and the other children have to guess what part it is.

5. Pantomime -- facial expressions, emotions, occupations, etc.

6. Games -- "Twister," "Simon Says," "Mother, May I?"

7. Body tracing, followed by "Movable Melvin" dolls

8. Touching body parts with other body parts on command

9. Size concepts

   a. Make yourself small, tall, etc.

   b. Stand tall, skinny, fat, etc.

10. Animal walks

11. Follow the Leader

12. Ragdoll

13. Grasping things with your toes

14. Making human figures with clay

15. Shadowing

16. Isometric exercises -- Children need to feel through their own bodies how the various parts of the body move and flex. Exercises done in place help children understand how muscles expand and contract.

17. Falling like a ragdoll

B. Suggested activities for eye-motor coordination training

1. Toss and catch a bean bag while lying on your back.

2. Number and letter grids

   a. Throw a bean bag to a designated letter or number.

   b. Flash cards with letters and numbers -- The child is shown a flash card. He then has to jump to the corresponding letter or number.

   C. Team relays for spelling

   d. Synonyms and antonyms -- A child is shown a word. He then has to jump to the letters that spell either the synonym or the antonym.

3. Baleros and Fishes (Mexican and American Indian ball-toss games)

4. Children sit in a circle. A child bats a balloon into the air and calls the name of another child. The new child comes into the circle and the game is continued.

5. Beat the Clock

6. Ringtoss

C. Suggested activities for laterality and symmetry training (awareness of the two sides of the body and correct identification of left and right)

1. Bouncing a ball from one side of the body to the other -- The child should express some awareness of the ball's crossing his midline.

2. Self-space orientation -- At first, use visual clues, which will eventually be eliminated. These orientation exercises can also be done to a metronome.

3. Movable Melvin and the Webster Masters

4. Touching body parts to other body parts on command

5. "Simon Says," "Mother, May I?" "Twister," hopscotch

6. Have the child close his eyes. Place heavy objects in one of his hands and have him identify the hand that has the object in it.

7. Snow angels (and variations)

8. Have the child lie on the floor with his eyes closed. On command, the child should roll to the left, right, back, or front side of his body.

9. "Circle Kick" -- A ball is placed in a circle. The players on the periphery attempt to keep it in the circle by kicking it.

10. "Circle Balance" -- A leader standing in the center of the circle demonstrates standing balances. The other children copy, using left and right.

11. Circle-game variations: circle travels, follow the leader around the circle

D. Suggested activities for rhythm training

1. Incorporate rhythm with other activities.

2. "Who Took the Cookie from the Cookie Jar?" "Rhythms"

3. Bouncing a ball to a metronome, then with rhymes

4. Marching and walking to a metronome, rhymes, and records

5. Clapping sequences

6. Syllable-singing

E. Suggested activities for balance training

1. Lift one foot and swing it to the count of 10.

2. Walking with a book on head

3. Chinese Get Up -- Two children sit on the floor back to back, with elbows locked. They then try to stand up in that position.

4. Rocking on feet

5. Body shapes

6. The child sits on the floor and spins, holding his feet up.

7. Two partners alternate standing and sitting by rocking with a wrist grip on each other.

8. Balance on knees and lean in different directions.

9. Balance body on a ball.

10. Balance-beam activities

11. Animal walks

12. Rail-walking -- Use a rope to indicate boundary.

F. Suggested activities for training in directionality and movement through space

1. One child is blindfolded. Another child must give him directional clues as to how he can get to a designated spot or perform a specific task.

2. Estimate the number of steps needed to get to a designated spot.

3. Variations or games based on letter and number grids

4. Throw a ball to a designated person with a designated hand.

5. "Four Base Change" -- Four players, with one on each base, change bases on command in a specified direction in a specified way--"Skip to the next base on your left side"-- with children taking turns being the caller.

6. Identify the physical characteristics of a room in spatial terms.

7. Hide-and-seek with objects, using spatial terms.

8. Maze-tracing; then verbalize sequence.

9. Self-space orientation

10. Two-Base Figure Eights -- Using two bases, issue progressive commands: "Walk a figure eight pattern around the bases; turn and go in the opposite direction; now, tell when your left and right sides are next to the bases"; variations on types of movements.

11. Four-Base Hop -- The caller calls out various commands: "Jump," "Hop," "Hop left-footed," etc. Players near the bases respond to the calls.

G. Suggested activities for training in spatial relations and temporal relations

1. Give a series of spatial-relations directions: "Put the red block on the table that is next to the door," "Put the yellow block on the chair that is in the front of the room," etc.

2. Obstacle courses (both two- and three-dimensional)

   a. Have the child explain how he would maneuver through the obstacle course, or

   b. Give verbal directions that the child will have to try to remember in sequence.

3. Mazes, dot-to-dot pictures, letter and number grids

4. Repeat the day's events in order, either verbally or in writing.

5. Pegboard designs

6. Give the child a set of directions that are out of sequence (such as from home to school), then have him place the directions in correct order.

7. Games for temporal relations: "Rhythms," "Who Took the Cookie from the Cookie Jar?"

8. Present three or four events that occurred during the day and have the child tell you which one happened first, second, etc.

9. Room-self orientation

10. Treasure hunts with space-orientation directions

11. DLM Space Relations Cards (Developmental Learning Materials, 7440 Natchez Ave., Niles, Ill. 60648)

12. Frostig exercises for spatial relations

VI. HOW CHILDREN WITH LEARNING PROBLEMS DIFFER FROM SLOW LEARNERS

If there is a way to determine how children with learning problems differ from those who are developmentally slow learners, it is from their overt behavior. Since this is a "gray" area, we qualify our words as we present the following possibilities.

Behavior Characteristics	Children with Learning Problems	Children Who Are Developmentally Slow Learners
Broad impression such a child often gives	Often very restless, touchy, and tense. Poor school achievement, out of line with evident intelligence. A likable youngster in many ways. "Challenging, but hard to manage in a busy classroom." "So easily upset." "Can't seem to remember what we learned a few days ago."	Usually fairly calm, easygoing. Not hard to teach, though somewhat slow--still he seems to retain what he learns. "He's slow to start, but once he catches on he is inclined to keep going."
General emotional stability	Impulsive, perhaps even flighty, at times. Hard to guess what he has on his mind; may not be able to tell you himself. Finds it hard to settle down.	A few emotional problems. Easy to settle in to work. Works hard but gets less completed.
Feelings about self	Often seems anxious and insecure, often without apparent reason. Unable to verbalize feelings.	Generally seems to feel quite secure; not easily frightened.
Sense of personal value	Often rates himself poorly; "How can I be bright when I am so stupid in everything?"	This child is apt to rate himself well, though he may be aware of his slower capacities, at least in some subject areas.

Behavior Characteristics	Children with Learning Problems	Children Who Are Developmentally Slow Learners
Ability to disregard actual classroom distractions; unable to work in noise, distracted by cluttered page.	Very easily distracted by slightest sound, light flickering, activities in the room--even his own thoughts. "How can anyone work in a place like this? I give up!"	Not bothered much. May even work harder when the group around him is also busy. "I like it this way. I do better."
Sensitivity to criticism	Readily dumped into moody feelings of discouragement and fear. Seldom able to admit this. These feelings may be hard for him to overcome.	Apt to show some resentment of criticism that he does not understand. Yet he feels warmly valued anyway. Can usually clear these feelings with a little help.
Reaction to failure	May be very upset, even after good counseling and warm encouragement.	This child can often take failure in stride surprisingly well. He is not apt to fret very long about things he cannot change.
Effect of pressure to "do better"	Reaction sometimes way out of line with actual pressure--"I am so jittery now I can't do anything at all."	"Well, I just do the best I can. That's all anyone can expect."
Unusual periods of tension and fussiness	"Often comes for no reason but may be left alone." "I just feel nervous now."	May have such periods, but they are short and infrequent. May be about something quite explainable.
Apparent tendency to worry	Rather high. Often a severe worrier. "I have to worry about that--even thought I get mad at myself for it."	Slight. "Why should I worry? What good would it do?"

Behavior Characteristics	Children with Learning Problems	Children Who Are Developmentally Slow Learners
General motor coordination	Sometimes very poor--not always. May vary from day to day. Usually very aware of his awkwardness and poor muscular skills	Usually in line with physical development.
Ability to discriminate left from right	Often unsure. "Tell me slower so I don't get mixed up when I try to do it."	In line with general development.
Vocabulary and comprehension level	These may reflect his best potentials. "I can tell you better than I can write it for you."	In line with general development--may reflect lack of interest.
Reading-ability level	May find great difficulty in reading well, but this can be relative.	Probably an assessment of modality will be needed before reading method is prescribed.
Arithmetic	Trouble may be from slight to great; also spatial problems.	May be poorest work, especially when he needs to record.
Ability to reproduce simple designs from memory	Often poor, yet not bizarre. Drawings may be below level of vocabulary and comprehension. (His own awareness of the disparity may add to his emotional problems.)	Generally in line with his ability level.
Ability to distinguish figure from ground in visual, auditory, and factual terms	Frequently great difficulty here. He may not be sure even when his responses are quite correct.	In line with general mental development and interest.
Ability to understand and work with simple devices and machines	Sometimes very poor. This may also discourage him. "Can't you do anything right?"	The shop teacher may suggest that in time he will be able to do many jobs well.

Behavior Characteristics	Children with Learning Problems	Children Who Are Developmentally Slow Learners
Involvement with bizarre or peculiar behavior	Often worse when he feels discouraged.	The child's responses seem more in line with those of younger boys and girls.

VII. FOLLOWING DIRECTIONS

Most referrals to a diagnostic teacher include the statement "This child does not follow directions." In analyzing the processes by which directions are given and followed, we find that they are not as simple as one might imagine, especially from the point of view of the person receiving the directions.

We use the example of "Go to the kitchen and get the juice from Mrs. Jones." Then we offer some of our own and other people's suggestions for helping with directions.

"Go to the Kitchen and Get the Juice from Mrs. Jones"

What is a direction?

A teacher says, "It's pickup time now." She may get action from a group of children, but not because she has given them a direction--for she has not given one. A mother says, "We always hang up our coats when we come home," as children come racing in from school. She may get some results, but not because she has given a direction. A direction is a plainly worded statement that gives authoritative instruction or bidding: "Put the blocks away now," "Hang your coat on this hook when you come home from school." These are directions, and action is expected.

If a child is told to "Go to the kitchen and get the juice from Mrs. Jones," what does he actually have to do?

1. Stop what he is doing at that moment
2. Listen to what the teacher is saying
3. Identify the steps implicit in the direction
4. Decide what steps to take

5. Find his way to the kitchen
6. Locate and identify Mrs. Jones
7. Ask Mrs. Jones for the juice
8. Wait until she gives him the juice
9. Decide how he is going to hold the juice
10. Find his way back to the classroom, bringing the juice
11. Notify the teacher that he has returned
12. Decide what to do with the juice
13. Remember what he was doing before the direction was given

In order to do what is expected of him by the direction, the child must:

1. Quickly shift attention from what he was doing to the teacher
2. Attend to what the teacher is saying
3. Focus on what the teacher is implying
4. Understand the words spoken by the teacher
5. Sequence the steps mentally
6. Visualize the route to Mrs. Jones
7. Visualize Mrs. Jones
8. Follow the mental map and move in the direction of the kitchen
9. Find Mrs. Jones
10. Remember what to ask for
11. Ask for it
12. Anticipate Mrs. Jones's response
13. Take the juice
14. Negotiate the mental map backward in order to return to the classroom
15. Tell the teacher of his return
16. Find a place for the juice
17. Keep the plan in careful sequence to avoid distraction

To succeed in a task that involves following directions, the child must have a pattern of skills to be able to

1. Shift gears; move attention from one activity to a second in rapid focus
2. Pay attention; focus his hearing without being distracted by other activities around him
3. Comprehend what is being said
4. Remember (short-term) what is being said
5. Remember (long-term) what people look like, how buildings are arranged
6. Move through space, guided by a mental image of where he is going
7. Keep attention on the sequence of actions to be taken both to and fro
8. Not be distracted

Teachers give directions many times during the course of a day. At first, they give them slowly, deliberately, and with great care. Then they increase the speed and assume understanding. Rarely are directions looked at in terms of their components. The child who is easily distracted, inattentive, or frustrated may not be able to follow directions easily and may need specific help.

The teacher who is frustrated by the group that never quite learns to follow directions may also need specific help. We suggest trying this experiment with three children.

When you give a direction, check the following items:

Type of direction

group _____ new _____

individual _____ old _____

first time	____	normal schedule	____
repeated	____	emergency	____
difficult task	____	involving self	____
gamelike task	____	involving others	____
motor	____	wide movement	____
visual	____	close at hand	____
verbal	____	locating in distance	____
auditory	____	one-step	____
memory			
long-term	____	two-step	____
short-term	____	multiple-step	____
reasonably stationary	____		

Anticipated responses

questioning	____	immediate action	____
refusal	____	distracted	____
ignoring	____	compliant	____
arguing	____	immobilized	____
willing	____		

Actual responses

Questions part of direction or whole direction ____

Hears but refuses to follow direction ____

Ignores the speaker and the direction ____

Argues the validity of the direction ____

Accepts and executes direction _____

Is distracted along the line as direction is being carried out _____

Unable to shift gears _____

Behavior report: In one sentence, explain what you did to reinforce what was needed. (That is, how did you get the child to do as you asked?)

How To Help a Child Who Has Trouble Following Directions

I. Help the child attend.

A. Speak directly to him.

B. Be sure he is looking at you when you speak.

C. Pat your shoulder when you speak to him.

II. Be sure he understands

A. Ask him to repeat what you said.

B. Ask him to tell you who or what was the reference; where the place is located; how he will get there.

C. Point with your outstretched arm where he is to go (if the place is in sight).

D. Show him the people, objects, and/or places involved in the direction.

E. Go through the steps of the direction with him and encourage him by saying something like, "Now that you know just what to do, tomorrow you will be able to do it by yourself."

III. Limit directions

A. Tell the child one part of what he is to do.

B. Wait until he has done that part before telling him what he is to do next.

C. Keep the direction limited to no more than three of the possible parts: "Listen to me; do this (put the puzzle you are playing with in the box, which is lying next to the puzzle)."

IV. Praise him adequately and plan directions that can succeed.

A. Praise him for what he does right. Do not mention what he failed to do. If he finds his way to the location but forgets or becomes distracted and you have to go find him, say, "You completed this part by yourself." The next day, have him do something similar.

B. Limit directions to what you believe he can do successfully, gradually adding more steps. If he can get where he is going but not any farther, arrange the next step by waiting for him to arrive and helping him with the second or third step.

C. If he cannot get to his location, ask him if he can tell (or show) you where it is. Walk it with him several times before asking him again to go alone. Praise him for the part of the direction he is following.

V. Give him time to shift gears.

A. Tell him five minutes before he is to stop doing one activity that "it is almost time to . . ."

B. When it is time, tell him, "Now it is time to . . ."

C. If he still cannot shift, quietly help him to put down his toys, book, etc., and then repeat, "Now it is time to . . ."

Direction-Following Revisited

The following directions come from classroom teachers, resource teachers, standardized tests, and other adult-to-child directions given in school situations. To characterize and cross-reference them is a difficult task. If we had to select categories of activity covered by directions, we might choose these:

a. Spatial
b. Location
c. Direction
d. Organization
e. Selection
f. Problem-solving
g. Inference
h. Negation
i. Discrimination
j. Indirection/nondirection

For example:

1. Read each word on the left. Find the same word on the right. Put a line under each matching word.
2. Go to the kitchen and bring the juice back to class.
3. Choose a partner.
4. Look at the bark of this tree.
5. See if you can find out whether air has weight.
6. Leave the room when it is your turn to turn the eggs.
7. Find the information in the history book.
8. Take your finger away and see what happens.
9. Give me a red pencil.
10. Draw a circle around the right answer.
11. Connect the homonyms in each column by drawing a line between them.
12. Get into a line at the front door.
13. Form a circle on the blue rug.
14. Walk through the halls.
15. Don't walk; run.
16. Don't work slowly.
17. Don't forget your homework.
18. Mark the word book.
19. Do not make any marks in your booklet until I tell you to.
20. Move your marker under the next box.
21. Keep working until I tell you to stop.
22. Open your booklet and fold the page under like this.

Categories of indirect imperatives are also often used with children:

1. I need a pencil.

2. It is cleanup time.

3. We need a blue-rug meeting.

4. We do not hang up our coats that way.

5. No one is rude in first grade.

6. We do not write until the signal is given.

7. Ours is a quiet classroom.

8. Story time is happy time. We must listen carefully.

As types of directions differ, so children's patterns of listening to directions vary. One child may be attentive, another recalcitrant, slow-processing, uninterested, and so on. These differences must be taken into account when giving directions.

Bibliography

The books listed here have proved useful to classroom teachers because of their specificity as well as their theoretical content.

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and Teaching Strategies. Boston: Houghton Mifflin, 1971. Although Learner is a theoretician, her book is replete with good ideas and suggestions and an excellent bibliography for each section. It covers all work done in the field as of 1971 and includes a directory of publishers and a glossary of technical terms.

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